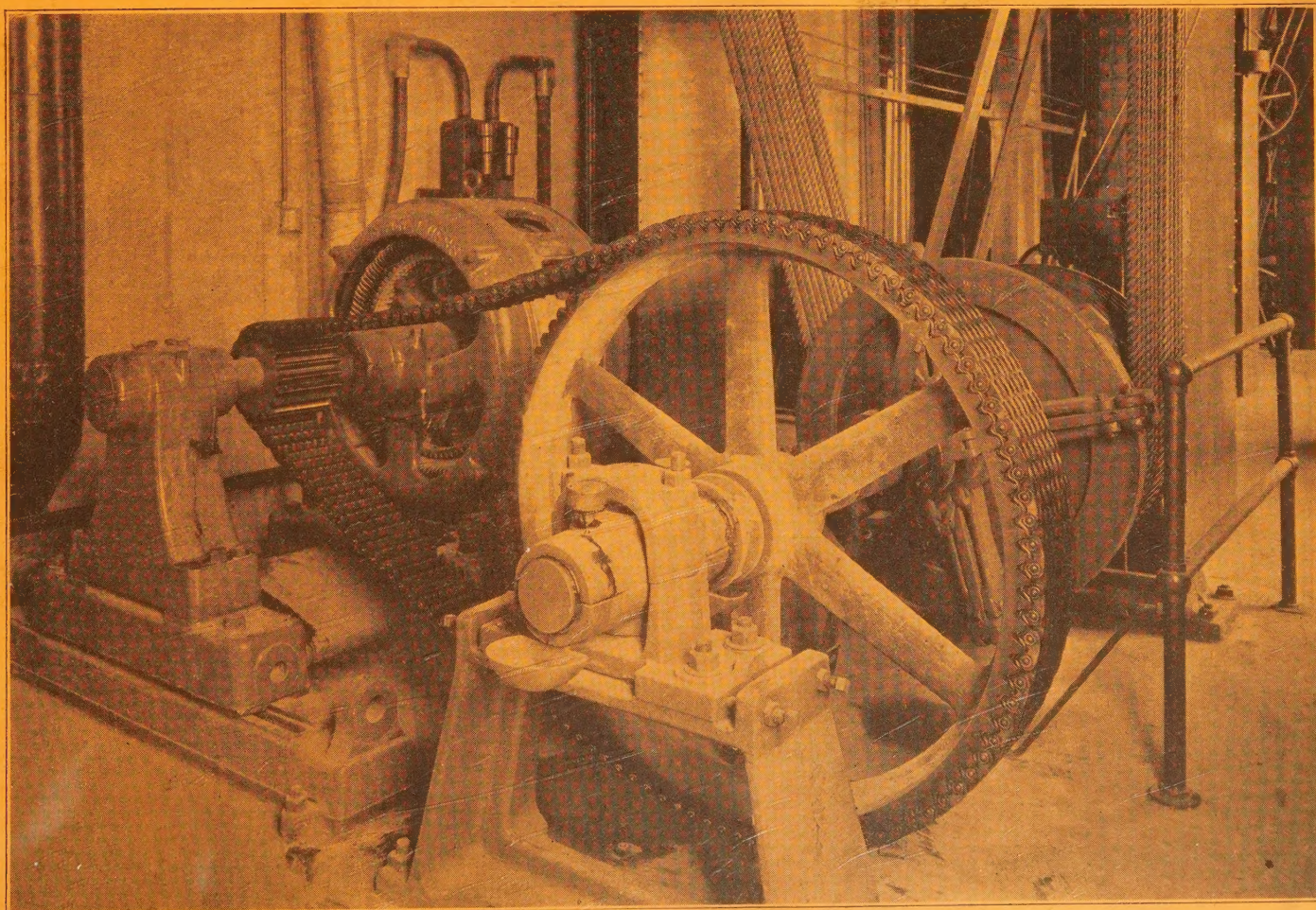


# GRAIN DEALERS JOURNAL

Devoted to the construction and operation of better grain handling plants.

## Improved Methods of Transmitting Power

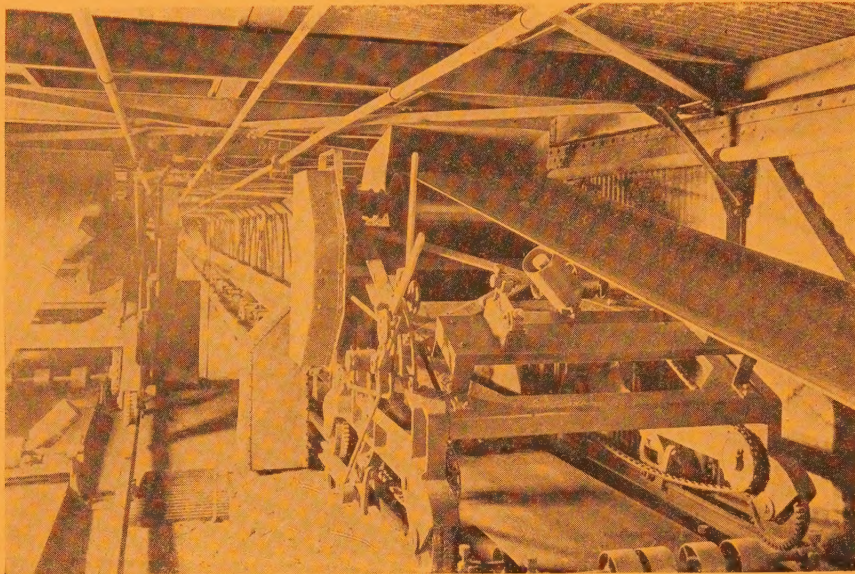
Owners and Operators of old or new grain handling plants who desire to facilitate the operation of their plants, eliminate waste, minimize the power and labor needed in every operation, reduce the cost and increase the convenience, as well as to correct the fire and casualty hazards of operation will carefully consider the recognized advantages of Ball and Roller Bearings, Improved Silent Chain, Rope and Belting Drives, Gear Speed Reducers, Individual Motors, Cut Out Clutches and Electrical control of all operations. Special attention is given in this number to improved facilities for transmitting power.



Silent Chain Drive on Receiving Leg of Portland Municipal Elevator.



## WEBSTER Grain Elevator Equipment



We could not manufacture successful conveyors, elevators, marine legs, and so on, unless a thorough understanding of grain elevator problems and practices enabled us to design each unit to perform its duty efficiently, economically, and in perfect harmony with the installation as a whole.

Each problem submitted to our engineering department is carefully studied by men whose wide experience in grain elevator work insures a design which embodies the best and latest in present day practice properly, adapted to the given conditions.

# THE WEBSTER MFG. COMPANY

## 4500-4560 CORTLAND ST., CHICAGO

Factories-Tiffin, O. and Chicago - Sales Offices in Principal Cities



## Directory of the Grain Trade

In Organized Markets Only Members of the Local Grain Exchange Will Be Listed

*HAVING YOUR name in this directory will introduce you to many old and new firms during the year, whom you do not know or could not meet in any other way. Many new concerns are looking for connections, seeking an outlet or an inlet, possibly in your territory. It is certain that they turn to this recognized Directory, and act upon the suggestions it gives them.*

### AMARILLO, TEXAS.

Early Grain & Elevtr. Co., wholesale grain.\*  
Stone & Co., Lester, wholesale grain.\*

### ATCHISON, KANS.

Moore-Lawless Grain Co., consgts., futures, pvt. wires.\*

### ATLANTA, GA.

Commercial Exchange Members.

Haym & Sims, successors to  
Gore & Son, J., wholesale brokers, grain, hay.\*

### BALTIMORE, MD.

Chamber of Commerce Members.

Baltimore Grain Co., grain receivers, exporters.\*  
Dennis & Co., grain merchants.  
England & Co., Inc., Chas., grain, hay.\*  
Fahey & Co., John T., grain receivers and exporters.\*  
Gill & Fisher, receivers and shippers.\*  
Hammond, Snyder & Co., Inc., receivers, exporters.\*  
Hax & Co., G. A., grain, hay, seeds.\*  
Jones & Co., H. C., receivers, shippers, exporters.\*  
Lederer Bros., grain receivers.\*  
Robinson & Jackson, grain commission merchants.\*  
Steen & Bro., E., grain receivers and exporters.\*

### BEAVER, OKLA.

Horne Grain Co., Texas wheat, barley, milo.

### BIRMINGHAM, ALA.

Birmingham Grain Co., grain, feed, flour.\*  
Hemphill & Co., R. C., mdse. & grain brokers.\*  
Montgomery Brokerage Co., grain, gr. pdts., hay, mdse.  
Western Grain Co., mfrs. mxd. feed, crn. meal, grits.\*

### BLOOMINGTON, ILL.

Hasenwinkle Grain Co., brokers of country grain.

### BOSTON, MASS.

Chamber of Commerce Members.

Benzaquin, Matthew D., grain brokerage commission.\*

### BUFFALO, N. Y.

Corn Exchange Members.

Armour Grain Co., grain merchants.\*  
Burris Grain Co., grain commission.\*  
Churchill Grain & Seed Co., receivers, shippers.\*  
Davis, Inc., A. C., grain.\*  
Doorty-Ellsworth Co., Inc., brokerage commission.\*  
Electric Grain Elevator Co., consignments.\*  
Globe Grain Co., receivers & shippers.\*  
Harold, A. W., grain, barley a specialty.\*  
Lewis Grain Corp., receivers & shippers.\*  
McConnell Grain Corporation, commission merchants.\*  
McKilien, Inc., J. G., receivers and shippers.\*  
Pratt & Co., receivers, shippers of grain.\*  
Ratcliffe, S. M., commission merchant.\*  
Seymour-Wood Grain Co., consignments.\*  
Sunset Grain & Feed Co., grain & feed.\*  
Taylor & Bournique Co., grain merchants.\*  
Traders & Producers Supply Co., millfeeds a specialty.\*  
Townsend Ward Co., The, consignments.\*  
Watkins Grain Co., consignments.\*  
Whitney & Gibson, consignments.\*

### CAIRO, ILL.

Board of Trade Members.

Cairo Grain Commission Co., consignments.\*  
Halliday Elevator Co., grain dealers.\*  
Lynch Grain Co., grain dealers.\*  
Thistlewood & Co., grain and hay.\*

### CARROLLTON, MO.

Claiborne Commission Co., commission merchants.\*

### CEDAR RAPIDS, IOWA.

Cedar Rapids Grain Co., corn and oats.\*  
Gifford Grain Co., grain and grain products.\*  
King Wilder Grain Co., grain shippers.\*

### CHATTANOOGA, TENN.

Board of Trade Members.

Hood Feed Co., flour, feeds, field seeds.

\*Member Grain Dealers National Association.

### CHICAGO, ILL.

Board of Trade Members.

Anderson & Co., W. P., grain commission merchants.\*  
Armour Grain Co., grain buyers.\*  
Bailey & Co., E. W., grain commission merchants.\*  
Bartlett-Frazier Co., grain merchants.\*  
Brennan & Co., John E., grain commission merchants.\*  
Carhart Code Harwood Co., grain commission.\*  
Doie & Co., J. H., grain and seeds.\*  
Freeman & Co., Henry H., grain, hay, straw.\*  
Gerstenberg & Co., commission merchants.\*  
Harris, Winthrop & Co., grain commission.\*  
Hitch & Carder, commission merchants.\*  
Holt & Co., Lowell, commission, grain and seeds.\*  
Lamson Bros. & Co., consignments solicited.\*  
Leland & Co., E. F., grain and seeds.\*  
McKenna & Dickey, commission merchants.\*  
Mumford & Co., W. R., grain, hay, millstuff.\*  
Norris Grain Co., grain merchants.\*  
Paynter, H. M., grain and field seeds.\*  
Pope & Eckhardt Co., grain and seeds.\*  
Press & Co., W. G., grain, provisions, stocks, etc.\*  
ReQua Bros., wheat a specialty.\*  
Runsey & Co., grain commission.\*  
Sawyers Grain Co., consignments.\*  
Schiffelin & Co., P. H., commission.\*  
Shaffer Grain Co., J. C., grain merchants.\*  
Somers, Jones & Co., grain and field seeds.\*  
Udlike Grain Co., consignments.\*

### CINCINNATI, O.

Grain & Hay Exchange Members.

Early & Daniel Co., grain, hay, feed.\*  
Gale Grain Co., The A. C., receivers & shippers.\*

### CLEVELAND, O.

Grain & Hay Exchange Members.

Bailey, E. I., grain and millfeed.\*  
Cleveland Grain & Milling Co., The, recvrs. & shprs.\*  
Gates Elevator Co., The, receivers and shippers.\*  
Sheets Elevator Co., The, grain, hay, straw.\*  
Shepard, Clark & Co., grain merchants.\*  
Strauss & Co., H. M., receivers, shippers hay & grain.\*

### COLBY, KANSAS.

Harris & Haynes, wholesale—brokers—grain.

### CLOVIS, N. MEX.

Western Elevtr. Co., The, recvrs-shprs, hdqtrs kafr-milo.\*

### DAVENPORT, IOWA.

Davenport Elevator Co., receivers and shippers.\*

### DALHART, TEXAS.

Kinard Grain Co., J. C., wholesale grain & hay.\*

### DECATUR, ALA.

Decatur Coal & Mfg. Co., grain and feedstuffs.\*  
Lyle-Taylor Grain Co., whlse. grain, hay, feeds.\*

### DECATUR, ILL.

Baldwin & Co., H. I., grain dealers.\*

### DENVER, COLO.

Grain Exchange Members.

Ady & Crowe Merc. Co., The, grain and hay.\*  
Ashcraft Grain Co., S. B., wholesale grain.\*  
Conley-Ross Grain Co., The, grain and beans.\*  
Crescent Flour Mills Co., The, merchant millers.\*  
Denver Elevator, wholesale grain, flour, millfeed.\*  
Farmers Elevator Co., The, H. F. Rover, Mgr.\*  
Gallagher Grain Co., grain merchants.\*  
Houlton Grain Co., wholesale grain.\*  
Kellogg Grain Co., O. M., receivers and shippers.\*  
McCaull-Dinsmore Co., wholesaler and commission.\*  
Moore-Lawless Grain Co., private wires to all markets.\*  
Phelps Grain Co., T. D., wholesale grain.\*  
Rocky Mountain Grain Co., export and domestic grain.\*  
Summit Grain Co., wheat, corn, oats, rye, barley.\*

### DES MOINES, IOWA.

Board of Trade Members.

Des Moines Elevtr. & Gr. Co., oats a specialty.\*  
Iowa Corn Products Co., receivers and shippers.\*  
Marshall Hall Grain Co., grain commission.\*  
Taylor & Patton Co., corn and oats.\*

### DETROIT, MICH.

Board of Trade Members.

Dumont, Roberts & Co., receivers, shippers.\*  
Huston, C. R., grain and hay.\*  
Lapham & Co., J. S., receivers & shippers.\*  
Lichterberg & Son, oats, corn, hay, straw.\*  
Simmons & Co., F. J., grain and hay.\*  
Swift Grain Co., consign or ask for bid.\*

### FORT WORTH, TEX.

Grain and Cotton Exchange Members.

Dorsey Grain Co., merchants—commission, consignments.\*  
Transit Grain & Com. Co., consignments, brokerage.\*

### GREAT FALLS, MONTANA.

Barkemeyer Grain & Seed Co., grain dealers.\*

### GREENVILLE, O.

Grubbs Grain Co., E. A., track buyers.\*

### HAMBURG, IOWA.

Sullivan & McBride S. & G. Co., red cob fodder corn.

### HASTINGS, NEBR.

Koehler-Twidale Elevator Co., grain dealers.\*

### HATTIESBURG, MISS.

Merchants Grocery Co., whlse. grocers, grain, fd., fr.

### HILLSBORO, KANSAS.

Hillsboro Roller Mills, gr. dlrs., fr., chick feed.

### HOUSTON, TEX.

Gulf Grain Co., grain, hay, millfeed.\*  
Rothschild Co., S., grain, c/s products, rice b/p.\*

### HUTCHINSON, KANS.

Board of Trade Members.

Central Grain Co., The, buyers for mills.\*  
Farmers Co-op. Com. Co., commission merchants.\*  
Goffe & Carkner, private wire.\*  
Hayes Grain Co., John, grain merchants.\*  
Hutchinson Grain Co., grain merchants.\*  
McClure Grain Co., J. B., buyers and sellers.\*  
Midwest Grain Co., The, shippers.\*  
Moore Grain Co., consignments—buyers of grain.\*  
Producers Grain Co., The, milling wheat.\*  
Southwest Grain Co., receivers and shippers.\*  
Union Grain Co., grain merchants.\*  
Vanderslice-Lynds Co., grain commission merchants.\*

### INDIANAPOLIS, IND.

Board of Trade Members.

Anderson & Mercer, grain commission & consignments.\*  
Boyd Grain Co., Bert A., strictly brokerage & com.\*  
Cleveland Grain & Milling Co., grain commission.\*  
Hayward-Rich Grain Co., grain commission.\*  
Steinhart Grain Co., commission and brokerage.\*  
Witt, Frank A., grain commission and brokerage.\*

### JACKSON, MICH.

Bartlett & Co., J. E., salvage grain buyers & sellers.\*  
Wagner-White Co., track buyers-sellers, grain-feed.\*

### JACKSON, MISS.

Field Co., Robt., succ. to P. L. Brittain Co.\*  
Royal Feed & Mfg. Co., mixed feed mfrs.\*

### KANSAS CITY, MO.

Board of Trade Members.

Christopher & Co., B. C., kafir, feterita, milo.\*  
Claiborne Commission Co., commission merchants.\*  
Croysdale Grain Co., commission merchants.\*  
Davis Grain Co., A. C., grain commission.\*  
Denton Kuhn Grain Co., consignments.\*  
Ernst Davis Grain Co., commissions.\*  
Federal Grain Co., receivers, shippers.\*

(Continued on next page.)



# Directory of the Grain Trade

In Organized Markets Only Members of the Local Grain Exchange Will Be Listed

## KANSAS CITY, MO., (Continued)

Frisco Elevators Co., grain merchants.  
Goffe & Carkner, grain commission.\*  
Hall-Baker Grain Co., consignments.  
Lichtig & Co., H., kafir, milo, screenings.  
Logan Bros. Grain Co., receivers and shippers.\*  
McCoy-Thomas Grain Co., consignments-futures.\*  
Miller Grain Co., S. H., consignments.  
Moore-Lawless Grain Co., grain receivers.\*  
Moore-Seaver Grain Co., grain receivers.\*  
Norris Grain Co., grain merchants and exporters.\*  
Boahen Grain Co., E. E., consignments.  
Root Grain Co., consignments and futures.\*  
Scouler Bishop Grain Co., receivers and shippers.\*  
Shannon Grain Co., consignments.  
Simonds, Shields, Lonsdale Grain Co., grain.\*  
Smith-Weekes Bkg. Co., grain broker.  
Thresher Grain Co., R. J., grain commission.\*  
Wilser Grain Co., consignments.\*

## LAWRENCE, KANS.

Underwood & Sons, J., grain, feed, seeds.

## LIBERAL, KANS.

Light Grain & Mfg. Co., mill pds., kafir, milo.  
Vickers Grain & Seed Co., grain and field seeds.

## LINCOLN, NEBR.

Grain Exchange Members.  
Lincoln Grain Co., grain merchants.\*

## LITTLE ROCK, ARK.

Grain Exchange Members.  
Caple & Stockton, hay, grain, feed.  
Davis, S. P., Est. 1893, grain, flour, cottonseed meal.\*  
Farmer Wilson Co., brokers, hay, grain, mill feed.\*  
Gordy Co., C. L., grain brok., hay, grain, mill feed.\*  
Wilson Co., John R., grain brokers.

## LOUISVILLE, KY.

Board of Trade Members.  
Bingham-Hewett Gr. Co., receivers-shippers of grain.\*  
Callahan & Sons, receivers and shippers of grain.\*  
Fruechtenicht, Henry, grain, feed, hay.\*  
Kentucky Public Elevator Co., storers and shippers.\*  
Verhoeff & Co., H., receivers and shippers.\*  
Zorn & Co., S., receivers and shippers.\*

## LYNCHBURG, VA.

Moon-Taylor Co. grain and hay brokers.

## M'KINNEY, TEXAS.

Reinhart & Company, wheat, corn, oats, maize.\*

## MARSHALL, MO.

Claiborne Commission Co., commission merchants.\*

## MEMPHIS, TENN.

Merchants Exchange Members.  
Davis & Andrews Co., grain, mixed feed.\*

## MILWAUKEE, WIS.

Chamber of Commerce Members.  
Bacon Co., E. P., grain and seed.\*  
Bell Co., W. M., commission merchants.\*  
Blanchard Grain Co., "Always Dependable."\*\*  
Bush Grain Co., grain merchants.  
Cargill Grain Co., grain and seeds.  
Donahue-Stratton Co., dls., grain and feed.\*  
Flanley Grain Co., consignments solicited.  
Frankie Grain Co., feeds, grain, hay.  
Fraser-Smith Co., commission merchants.  
Froedtert Gr. & Malting Co., grain commission.  
Kamm Co., P. C., grain shippers.\*  
Lamson Bros. & Co., grain commission.  
Milwaukee Grain Commission Co., grain commission.\*  
Rang & Co., Henry, commission merchants.  
Runkel & Dadmun, grain commission merchants.\*  
Taylor & Bourne Co., grain merchants.\*  
Uplike Grain Co., consignments solicited.\*

## MERIDIAN, MISS.

Board of Trade Members.  
Lyon & Co., A. J. whole. gro., grain, feed.  
Meyer Bros., wholesale groc., grain, feed.  
Sturgis Co., grain dealers, mixed feed mfrs.\*  
Threefoot Bros. & Co., whole. grain, feed, fl., gro.\*

## MIDDLEPOINT, OHIO.

Pollock Grain Co., grain, hay, straw, ear corn.

## MIDDLETOWN, CONN.

Meech & Stoddard, Inc., grain, feed, hay, flour.\*

## MINNEAPOLIS, MINN.

Chamber of Commerce Members.  
Cargill Commission Co., grain commission.\*  
Cereal Grading Co., grain merchants.\*  
Hankinson & Co., H. L., grain commission.\*

## MINNEAPOLIS, MINN., (Continued).

Chamber of Commerce Members.  
Malmquist & Co., C. A., receivers & shippers.\*  
Marfield Grain Co., grain commission.\*  
McCeull Dinsmore Co., consignments solicited.\*  
Seidl, Frank J., all grains and feeds.\*  
Sheffield Elevator Co., shippers of grain.\*  
Sterling Grain Co., receivers and shippers, all grains.\*  
Van Dusen-Harrington Co., grain merchants.\*  
Welch Co., E. L., mill oats and screenings.\*

## MOULTRIE, GA.

Delay, A. J., flour and grist mill.

## NASHVILLE, TENN.

Grain Exchange Members.  
Allen Grain Co., receivers and shippers.\*  
Allfeed Milling Co., feed manufacturers.  
Kerr, S. S., receiver and shipper.\*  
Tennessee Grain Co., receivers and shippers.\*  
Tyner & Co., John A., receivers and shippers.\*

## NEWARK, N. J.

Smith & Wallace Co., J. C., receivers, shippers.

## NEW CASTLE, PA.

Hamilton Co., grain, feed, flour, hay, potatoes.

## NEW ORLEANS, LA.

Board of Trade Members.  
Anderson & Jackson, Inc., exporters of grain.\*  
Barr, R. J., grain exporter.\*  
Fox Co., C. E., exporters.\*  
Gibbons, J. T., gr. dealers, mixed fd. mfrs., expts.  
Matthews Sons, Geo. B., mill feed manufacturers.  
Nathan & Pettis, fwdg. agt. & expt. fght. broker.\*  
Neumond, Inc., K. & E., dls. & expts. in fd. articles.\*  
Richeson Co., Inc., W. L., expt. shpg., fgt. bkg. & fg.\*  
Rodd & Co., Chas. M., gr. brokers & fwdg. agents.\*  
Waterman & Co., J. S., gr., flour & fd. bkrs., dr. jobs.\*

## NEW YORK CITY.

Produce Exchange Members.  
Jones & Co., M. B., buyers—quote us.\*  
Knight & Company, commission merchants.\*  
Therrien, A. F., broker.

## NORFOLK, VA.

Moon-Taylor Co., grain and hay brokers.

## OKLAHOMA CITY, OKLA.

Grain Exchange Members.  
Cherokee Grain Co., grain merchants.\*  
Conyers Grain Co., grain merchants.\*  
Lang Grain Co., J. H., prompt and efficient service.\*  
Langenberg Bros. Grain Co., grain merchants.\*  
Marshall Grain Co., grain, feed, seeds.\*  
Moore, George L., grain merchant.\*  
Okla. City M. & E. Co., grain merchants, millers.\*  
Perkins Grain Co., W. L., brokers.\*  
Scannell-Winters Grain Co., grain and feed.\*  
Stinnett Grain Co., grain merchants.\*  
Stowers Grain Co., W. B., commission merchants.\*  
Strader Alexander Co., grain, hay, feed.\*  
White Grain Co.\*

## OMAHA, NEBR.

Grain Exchange Members.  
Butler Welsh Grain Co., grain merchants.\*  
Crowell Elevator Co., receivers, shippers.\*  
Holmquist Elevator Co., receivers and shippers.\*  
Maney Grain Co., The, consignments.\*  
Miller Wilson Grain Co., receivers and shippers.\*  
Roberts Grain Co., Geo. A., grain merchants.\*  
Stockham Grain Co., E., commission merchants.\*  
Trans-Mississippi Grain Co., receivers and shippers.\*  
United Grain Co., grain commission.\*  
Uplike Grain Co., consignments.\*

## OTTAWA, KANS.

Ross Milling Co., The, millers, hard wheat flour.

## PAMPA, TEXAS.

McMurtry Grain Co., L. C., wheat, kafir, milo.\*

## PEORIA, ILL.

Board of Trade Members.  
Bartlett Co., S. C., grain commission.  
Bowen Grain Co., H. D., receivers & shippers.  
Cole Grain Co., Geo. W., receivers and shippers.\*  
Dewey & Sons, W. W., grain commission.\*  
Feltman Grain Co., C. H., grain commission.\*  
Harrison, Ward & Co., receivers & shippers.\*  
Lake Grain Co., grain commission.\*  
McFadden & Co., G. C., consignments.\*  
Miles, P. B. & C. C., grain commission.\*

## PEORIA, ILL., (Continued).

Mueller Grain Co., receivers and shippers.\*  
Shaffer Grain Co., J. C., receivers & shippers.\*  
Turner Hudnut Co., receivers and shippers.\*  
Tyng Grain Company, receivers and shippers.\*

## PHILADELPHIA, PA.

Commercial Exchange Members.  
Delp Grain Co., E. E., grain and millfeeds.\*  
Dunwoody Co., Etl., flour, grain, feed.\*  
Miller & Sons, L. F., grain, seeds, hay.\*  
Richardson Bros., grain, flour, millfeeds.\*  
Richardson, Geo. M., grain and feeds.\*  
Rogers & Co., E. L., hay, straw, grain, feed.\*  
Stites, A. Judson, grain and millfeed.\*  
Young & Co., S. H., wheat, corn, oats.

## PITTSBURGH, PA.

Members Grain and Hay Exchange.  
Allen & Co., H. S., grain and hay.\*  
Bursen Grain Co., C. G., recvrs., shpr., commission.\*  
Elwood & Co., R. D., hay and grain.\*  
Foster Co., C. A., grain merchants.  
Geidel & Leubin, grain and hay.  
Hardman & Daker, grain, hay, millfeed.\*  
Harper Grain Co., corn a specialty.\*  
Heck & Co., W. F., grain, hay, millfeed.\*  
McCague, Ltd., R. S., grain, hay.\*  
Rogers & Co., Geo. E., grain and hay.\*  
Smith & Co., J. W., grain merchants.\*  
Stewart & Co., Jesse C., grain and mill feed.\*  
Walton Co., Samuel, grain and hay.\*

## PONTIAC, ILL.

Balbach, Paul A., grain buyer, all markets.

## PORTLAND, ORE.

Pacific Coast Elevator Co., grain.  
Pacific Grain Co., grain exporters.\*

## PUEBLO, COLO.

McClelland Met'l I. & R. Co., grain, hay and feed.\*

## QUINTER, KANSAS.

Jones-Rogers Grain Co., brokers.

## RICHMOND, VA.

Grain Exchange Members.  
Beveridge & Co., S. T., grain, hay, feeds, seeds.

## ROCHESTER, N. Y.

Dailey Bros., Inc., receivers and shippers.\*

## SAGINAW, MICH.

Saginaw Milling Co., flour, feed, hay, grain.\*

## SALINA, KANS.

Board of Trade Members.  
Bossemeyer Grain Co., The Paul, grain merchants.\*  
Freeman Grain Co., receivers and shippers.  
Hayes Grain Co., Always in the market.  
Richter Grain Co., wheat, coarse grains & millfeed.\*  
Rickel, E. L., grain receiver and shipper.  
Service Grain Co., grain, feed, grain products.\*  
Weber Flour Mills Corp., millers, exporters, grain dls.\*

## SALT LAKE CITY, UTAH.

Utah-Idaho Bkg. Co., whole. grain, hay, flour, feed.\*

## ST. JOSEPH, MO.

Grain Exchange Members.  
Aunt Jemima Mills Co., A. J., hominy feed.  
Button-Simmons Grain Co., grain commission.\*  
Claiborne Commission Co., commission merchants.\*  
Yancey Grain Co., commission merchants.\*  
Marshall Hall Grain Co., consignments solicited.\*

## SAN ANTONIO, TEXAS

King, Douglas W., wheat, corn-brok., Texas R. Oats.\*

## ST. LOUIS, MO.

Merchants Exchange Members.  
Annan Burg G. & M. Co., flour, grain, millfeed.\*  
Ballard-Messmore Grain Co., recvrs., grain, hay, seeds.\*  
Bushfield Grain Co., receivers and shippers.  
Claiborne Commission Co., commission merchants.\*  
Dreyer Commission Co., feedingstuffs, grain, seeds.\*  
Elmore Schultz Gr. Co., receivers and shippers grain.\*  
Goffe & Carkner Co., grain commission.\*  
Graham & Martin Grain Co., grain commission.\*  
Marshall Hall Grain Co., grain commissions.\*  
Langenberg Bros. Grain Co., grain commission.\*  
Morton & Co., grain commission.\*  
Nanson Commission Co., grain commission.\*  
Picker & Beardsley Com. Co., grain and grass seed.\*  
Toberman, Mackey & Co., grain, hay, seeds.\*

## SEDALIA, MO.

Claiborne Commission Co., commission merchants.\*



## Directory of the Grain Trade

In Organized Markets Only Members of the Local Grain Exchange Will Be Listed

### SIoux CITY, IOWA.

Board of Trade Members.  
Button Co., L. C., grain commission.\*  
McCaull Dinsmore Co., commission.\*  
Terminal Grain Corp., receivers & shippers.\*  
Rumsey & Co., receivers of consignments.\*  
Western Terminal Elevator Co., receivers and shippers.\*

### SIoux FALLS, S. D.

Burke Grain Co., grain merchants.

### SPRINGFIELD, MO.

Claiborne Commission Co., commission merchants.\*

### STERLING, COLO.

Moore, James A., grain dealer.

### SUPERIOR, NEBR.

Bossemeyer Bros. Terminal Elevator.\*  
Elliott & Myers, grain merchants.\*  
Superior Terminal Elvtr. Co., grain, corn products.

### TAMPA, FLA.

Bonacker Bros., brokers, grain, hay, feed, flour.\*

### THOMASVILLE, GA.

Burch & Son, W. H., corn millers.

### TOLEDO, OHIO.

Produce Exchange Members.  
De Vore & Co., H. W., grain and seeds.\*  
King & Co., C. A., grain and seeds.\*

### TOLEDO, OHIO, (Continued).

Morehouse & Co., wholesale grain and seeds.  
Southworth & Co., grain and seeds.\*  
Wickenhiser & Co., John, grain receivers, shippers.\*  
Young Grain Co., grain.\*

### TOPEKA, KANS.

Derby Grain Co., wheat, corn, oats, and millfeed.\*  
Golden Belt Grain & Elvtr. Co., The, recvrs. & shprs.\*  
Topeka Grain Co., wheat, corn, oats, mill & ctn. feed.\*

### TULIA, TEXAS.

Cowan Grain Co., W. C., wheat, oats, maize, kafir.\*

### TURON, KANS.

Turon Mill & Elvtr. Co., corn, wheat, millfeed, flour.

### WASHINGTON, D. C.

Wilkins-Rogers Mig. Co., Inc., receivers and shippers.\*

### WICHITA, KANS.

Board of Trade Members.  
Baker-Evans Grain Co., milling and export wheat.\*  
Beyer Grain Co., consignments and mill orders.\*  
Blood Grain Co., I. H., consignments, mill orders.\*  
Claiborne Commission Co., commission merchants.\*  
Clark Grain Co., C. M., all kinds grain and feed.\*  
Craig Grain Co., J. W., consignments and mill orders.\*  
Foot Grain Co., consignments.  
Hall Baker Grain Co., exporters.

### WICHITA, KANS., (Continued).

Hayes Grain Co., John, Okla.-Kan., wheat for mills.  
Hipple Grain Co., consignments.  
Kansas Flour Mills Co., receivers and shippers.  
Kramer Grain Co., receivers and shippers.\*  
Linton-Christy Grain Co., strictly brokerage & comm.\*  
Norris Grain Co., exporters.  
Raymond Grain Co., consignments.\*  
Simonds-Shields-Lonsdale Gr. Co., exporters.  
Smith-McLinden Grain Co., milling and export wheat.  
Stevens-Scott Grain Co., receivers and shippers.\*  
Strong Trading Co., wholesale grain and feed.\*  
Terminal Elevators, exporters.  
Wallingford Bros., receivers and shippers.\*  
Wichita Flour Mills Co., millers and grain merchants.  
Wichita Grain Co., receivers and shippers.\*  
Wichita Terminal Elev. Co., general elevator business.\*

### WICHITA FALLS, TEXAS.

Mytinger Grain Co., J. C., grain, feed, seeds.\*

### WINCHESTER, IND.

Goodrich Bros. Hay & Grain Co., whlrs. gr. and seeds.\*

### WINFIELD, KANS.

Daves & Daves, red mlg. wheat, mill feed.\*

### WOODWARD, OKLA.

Sharon Grain Co., wholesale grain.

\*Member Grain Dealers National Association.

## RECEIVERS, SHIPPERS AND BROKERS

### Des Moines Elevator & Grain Co.

Terminal Elevator Capacity 700,000 Bu.  
We specialize in Oats and High Grade Corn, Oats sacked for Southern Trade.  
HUBBELL BLDG. DES MOINES, IOWA

### TAYLOR & PATTON CO.

Terminal elevator capacity 250,000 bushels. Buyers and shippers of Corn and Oats.  
DES MOINES - IOWA

### E. P. BACON CO.

Grain Commission Merchants  
Sellers of Cash Grain and Field Seeds on Consignment  
MILWAUKEE--CHICAGO--MINNEAPOLIS

### Cedar Rapids Grain Co.

RECEIVERS and SHIPPERS  
CEDAR RAPIDS, IOWA

### Hayward-Rich Grain Co.

GRAIN COMMISSION  
511 Board of Trade Building  
INDIANAPOLIS, IND.

### MATTHEW D. BENZAQUIN

GRAIN AND FEED  
Brokerage and Commission  
DOMESTIC and EXPORT  
505 Chamber of Commerce Boston, Mass.

### L. W. FORBELL & CO.

Strictly Commission Merchants  
Specialists in WHEAT, CORN, OATS  
Consignments Solicited  
340-342 Produce Exchange, NEW YORK, N. Y.

### KNIGHT & COMPANY

Grain Brokers and Commission Merchants  
CONSIGNMENTS SOLICITED  
New York Chicago Baltimore

Solicit inquiries for Natural and Kiln

Dried Corn, Country White Oats

### E. A. GRUBBS GRAIN CO.

Greenville, Ohio

### E. I. BAILEY

CLEVELAND, OHIO  
Receiver and Shipper of  
Corn, Oats, Mill Feed  
Ask for Prices

We Want Soft

### MILLING WHEAT

also Hard Winter Wheat  
Reinhardt & Company  
McKinney, Texas

### RED MILLING WHEAT MILL FEED

Daves & Daves Grain Co.  
WINFIELD, KANSAS

### THE S. R. WASHER GRAIN CO. ELEVATOR "A"

Receivers -:- Shippers  
COMMISSION MERCHANTS  
Atchison, Kans.

## CONFIRMATION BLANKS

Simple - Complete - Safe

The use of these confirmations makes for safer business. Spaces are provided for recording all essential conditions of each trade.

Fifty confirmations in triplicate, bound with pressboard and wire stitched, size 5 1/2 x 8".

Order form No. 6 CB, Price 90 cts.

GRAIN DEALERS JOURNAL, 309 S. La Salle Street, CHICAGO

If you would avoid trade disputes, and differences and prevent expensive errors, use triplicating confirmation blanks. You retain tissue copy, sign and send original and duplicate to customer. He signs one and returns the other.

This places the entire burden for any misunderstanding of your intentions upon the other party and protects you against the expensive misinterpretation of your trades.

The paper the Grain Dealer supports, because it supports the Grain Dealer—

GRAIN DEALERS JOURNAL



Grain Exchange  
Members**SIOUX CITY**Grain Exchange  
Members**L. C. BUTTON CO.**

510-511 Grain Exchange SIOUX CITY, IOWA

**General Grain and  
Commission Business**  
USE US**RUMSEY & COMPANY**

Sioux City

Chicago

Grain Business in All Branches

**C. N. D. QUOTATIONS**

We have enlarged upon our old form of recording C. N. D. quotations and now have a new book which, in addition to having spaces for Wheat, Corn and Oats, also has spaces for Rye and Barley. Each sheet is headed "Board of Trade Quotations for Week Commencing Monday.....192....." Columns are provided for three Wheat options, three Corn, three Oats, three Rye and two Barley; have spaces for the market hourly and at close. Closing prices for previous week are listed at top.

Sixty sheets, printed on bond paper,  $9\frac{1}{4} \times 11\frac{1}{4}$ , are well bound in book form, with flexible pressboard covers—a year's supply. Order Form 97-5. Price \$1.00.

**GRAIN DEALERS JOURNAL**

305 South LaSalle St. Chicago, Ill.

**Terminal Grain Corporation**

RECEIVERS and SHIPPERS

Consignments Solicited

SIOUX CITY, IOWA

**Chick and Poultry Foods**

Ask for prices on these and all other wheat, corn and oat feeds

**AKRON MILLING CO.**

Manufacturers

SIOUX CITY, IOWA

Board of Trade  
Members**CAIRO**Board of Trade  
Members**CORN****Halliday Elevator Company**  
**GRAIN DEALERS**  
CAIRO, ILL.**OATS**Merchants Exchange  
Members**ST. LOUIS**Merchants Exchange  
Members**TOBERMAN, MACKEY & CO.****GRAIN—HAY—SEEDS**FASTEST GROWING COMMISSION HOUSE IN AMERICA  
SAINT LOUIS**PICKER & BEARDSLEY COM. CO.**

"THE CONSIGNMENT HOUSE OF ST. LOUIS"

**GRAIN, HAY, GRASS SEEDS, KAFIR, MILO**

125 MERCHANTS EXCHANGE BLDG.

ST. LOUIS, MO.

JOHN SCHULTZ  
PresidentV. C. ELMORE  
Vice-PresidentJOHN H. HERRON  
Secretary and Treasurer**ELMORE-SCHULTZ GRAIN COMPANY**  
EXPERT—SERVICE—GIVEN—CUSTOMERS

105-107 Merchants Exchange

ST. LOUIS

*It is better to have shipped to us than to wish you had***Nanson Commission Co. GRAIN, HAY and SEEDS**

202 Merchants Exchange Bldg., ST. LOUIS, MO.

**This space  
is yours**

If you are the first to apply for it.

Established 1877

**Langenberg Bros. Grain Co.**

St. Louis

New Orleans

H. A. VON RUMP  
Prop.O. H. SCHWARZ  
Asst.**Von Rump Grain Co.****WHEAT-CORN-OATS**

Grain Commission

St. Louis

C. W. OUTHIER  
Iowa Branch  
Prescott, Iowa416-421  
Merchants  
Exchange

RECEIVERS  
SHIPPERS  
**MARSHALL HALL  
GRAIN CO.**  
ST. LOUIS  
EXPORTERS  
OF GRAIN

Every time you mention the  
**GRAIN DEALERS JOURNAL**  
to an advertiser, you  
help to make it bigger and better.

**Want an Elevator?** Then consult the "Elevators  
for Sale" columns in this issue  
of the Grain Dealers Journal.



# BUFFALO

**S. M. Ratcliffe,**  
Commission Merchants.

**The Townsend-Ward Co.,**  
Grain Merchandising and Consignments.

**Globe Grain Co., Inc.**  
Receivers and Shippers.

**Watkins Grain Co.,**  
Consignments.

**A. W. Harold,**  
Grain—Barley a Specialty.

**Whitney & Gibson,**  
Consignments. Our Specialty, Wheat.

**J. G. McKillen, Inc.,**  
Receivers and Shippers.

**Armour Grain Co.,**  
Grain Merchants.

**McConnell Grain Corporation,**  
Commission Merchants.

**A. C. Davis, Inc.,**  
Grain Commission

**Burns Grain Co.,**  
Grain Commission.

**Seymour-Wood Grain Co.,**  
Consignments.

**Churchill Grain & Seed Co.,**  
Receivers and Shippers.

**Pratt & Co.,**  
Receivers and Shippers.

**Taylor & Bournique Co.,**  
Grain Commission.

**The Electric Grain Elevator Co.,**  
Consignments.

**Lewis Grain Corporation,**  
Ship Buffalo—Consign to Lewis

**Sunset Feed & Grain Co., Inc.,**  
Receivers and Shippers

**The Great Interi-  
or Market of the  
East . . . . .**



**Offers A Steady  
Demand . . . . .**



Board of Trade  
Members

CHICAGO

Board of Trade  
Members

Special Wire and Salesman Service

**LAMSON BROS. CO.****WHEAT, CORN  
OATS, RYE**

No. 6 Board of Trade, Chicago, Ill.

CONSIGNMENTS  
SOLICITEDWE PLACE  
GRAIN TO ARRIVEGood Execution Keeps Customers  
Keeping Customers is Our Business**W. G. PRESS & CO.**  
GRAIN, PROVISION, STOCKS  
327 So. La Salle St., CHICAGO*Write for Daily Market Report,  
Mailed Free.*44 Years Active Members Chicago  
Board of Trade**GERSTENBERG & CO.**COMMISSION MERCHANTS  
GRAIN and SEEDS

Barley a Specialty

Personal attention given  
Sample Orders

309 S. La Salle St. CHICAGO

Traveling Representatives:

Ray Gerstenberg Jack De Courcy

Branch Office:

FT. DODGE, IOWA A. J. MOORE, Mgr.

**E. F. Leland & Company**

Successors to

WARE &amp; LELAND

Grain Stocks Bonds

231 So. WELLS STREET

Corner Quincy Street  
CHICAGO

CONSIGNMENTS SOLICITED

MEMBERS

New York Stock Exchange  
New York Cotton Exchange  
New York Produce Exchange  
Chicago Board of Trade  
Chicago Stock Exchange  
Minneapolis Chamber of Commerce  
Kansas City Board of Trade  
St. Louis Merchants Exchange  
Omaha Grain Exchange  
Winnipeg Grain Exchange  
Milwaukee Chamber of Commerce  
Pittsburgh Stock Exchange

**JOHN E. BRENNAN & CO.** GRAIN and SEEDS  
COMMISSION MERCHANTS CHICAGO**BARLEY WANTED**Two Rowed and  
Heavy White*Send Samples***The Quaker Oats Company**Grain Department  
Chicago, IllinoisPhilip H. Schifflin Eugene Schifflin  
Pres. Vice Pres. & Treas.R. E. Andrews  
Secretary**Philip H. Schifflin & Co.**  
IncorporatedCOMMISSION MERCHANTS  
Grain, Seeds and Provisions515-518 Postal Telegraph Building  
CHICAGO, ILL.

Branch Offices:

Fred F. Munson R. T. O'Neill  
319-320 Lincoln Bldg. 210 Heggie Bldg.  
Champaign, Ill. Joliet, Ill.Travelling Representative  
G. N. McReynolds, Alton, Ill.

CONSIGN TO

**WEGENER BROS.**

Grain Commission

309 SOUTH LA SALLE STREET

CHICAGO

**BARTLETT FRAZIER CO.** GRAIN MERCHANTS  
Western Union Bldg.  
CHICAGO

SHIP US THAT NEXT CAR

**Harris, Winthrop & Co.**15 Wall Street, New York  
The Rookery, Chicago**GRAIN COMMISSION**

Members of Principal Exchanges

**W. P. ANDERSON & CO.**  
INC.**GRAIN**CONSIGNMENTS AND HEDGING  
ORDERS SOLICITED  
327 S. La Salle St., CHICAGO**E. W. BAILEY & CO.**  
Commission Merchants

Receivers and Shippers of

GRAIN, SEEDS, PROVISIONS  
72 Board of Trade, CHICAGORead the Advertising pages.  
They contain many stories of interest.  
The *Grain Dealers Journal* pre-  
sents only reputable concerns.



Board of Trade  
Members

# CHICAGO

Board of Trade  
Members

## THE UPDIKE GRAIN COMPANY

*"The Reliable Consignment House"*

CHICAGO

OMAHA

KANSAS CITY

MILWAUKEE

SIOUX CITY

### CARHART CODE HARWOOD CO.

**Grain Commission**

Board of Trade

CHICAGO

### ARMOUR GRAIN COMPANY

GRAIN MERCHANTS

Manufacturers of

ARMOUR'S STOCK AND DAIRY FEEDS AND CEREAL PRODUCTS

208 So. La Salle Street, Chicago, Ill.

### HITCH & CARDER

COMMISSION MERCHANTS

Members Chicago Board of Trade

Webster Bldg., 327 So. La Salle St., CHICAGO, ILL.

Tel. Wabash 6584

### POPE & ECKHARDT CO.

GRAIN and SEEDS

111 W. Jackson St. CHICAGO

### J. C. SHAFFER GRAIN CO.

Grain Merchants

111 W. Jackson Boulevard

Chicago, Ill.

WE WANT YOUR BUSINESS  
NOT LATER—BUT TODAY

Especially Consignments  
GRAINS ALL WAYS

**McKENNA & DICKEY**

60 Board of Trade, Chicago

FOR BEST RESULTS SHIP YOUR GRAIN AND SEEDS TO

### J. H. DOLE & COMPANY

RECEIVERS AND COMMISSION MERCHANTS

327 South La Salle Street

CHICAGO, ILL.

### J. Rosenbaum Grain Co.

Grain Commission Merchants

CHICAGO

### RUMSEY & COMPANY

COMMISSION MERCHANTS

Board of Trade

Chicago, Illinois

Have You  
Seed For Sale?

Do You Wish  
To Buy Seed?

See our "Seeds For Sale—  
Wanted" Department  
This Number

For Best Results  
CONSIGN

### ReQua Brothers

Board of Trade, CHICAGO

W. M. TIMBERLAKE, Mgr. Cash Grain

Chicago Grain & Salvage Co.  
DEALERS IN

### SALVAGE GRAIN

GRAIN, FEEDS, Etc.

WRITE OR WIRE

930 Postal Telegraph Bldg.

CHICAGO

The paper the Grain Dealer  
supports, because it supports  
the Grain Dealer—

GRAIN DEALERS JOURNAL

### Henry H. Freeman & Co.

COMMISSION MERCHANTS

**GRAIN HAY STRAW**

66 BOARD OF TRADE, CHICAGO

## THE CORN EXCHANGE NATIONAL BANK

Of Chicago

Capital and Surplus Fifteen Million Dollars

#### Officers

ERNEST A. HAMILL, Chairman of the Board  
EDMUND D. HULBERT, President  
CHARLES L. HUTCHINSON, Vice-President  
J. EDWARD MAASS, Vice-President  
OWEN T. REEVES, Jr., Vice-President  
NORMAN J. FORD, Vice-President

JAMES G. WAKEFIELD, Vice-President  
EDWARD F. SCHOENECK, Cashier  
LEWIS E. GARY, Ass't Cashier  
JAMES A. WALKER, Ass't Cashier  
CHARLES NOVAK, Ass't Cashier  
HUGH J. SINCLAIR, Ass't Cashier

#### Director

WATSON F. BLAIR  
CHAUNCEY B. BORLAND  
EDWARD B. BUTLER  
BENJAMIN B. CARPENTER  
CLYDE M. CARR  
ERNEST A. HAMILL  
CHARLES H. HULBURD  
JOHN J. MITCHELL

CHARLES L. HUTCHINSON  
MARTIN A. RYERSON  
J. HARRY SELZ  
EDWARD A. SHEDD  
ROBERT J. THORNE  
CHARLES H. WACKER  
HENRY P. CROWELL  
EDMUND D. HULBERT

Foreign Exchange — Letters of Credit — Cable Transfers

## ACCOUNTS OF GRAIN MERCHANTS INVITED



# DENVER

is in position to give you gratifying returns on your grain shipments. The extra effort shown by the Denver Grain Exchange Members is responsible for so many new customers becoming old customers. You owe it to your business to try Denver service.

You can learn more about this paramount service by getting into communication with any of the Grain Exchange Members listed here. They welcome all inquiries.

**The Ady & Crowe Mercantile Co.**  
Grain, Hay, Beans.

**Denver Elevator**

Wholesale Grain, Flour and Mill Feed.  
We operate 30 elevators in Eastern Colorado.

**Houlton Grain Company**

Wholesale Grain—Get in touch with us.

**O. M. Kellogg Grain Co.**

Receivers and shippers of all kinds of Grain.

**McCaull-Dinsmore Co.**

Grain—Wholesaler and Commission.

**The Farmers Elevator Co.**

(F. C. Ayres Merc. Co., Owners)  
H. F. Rover, Mgr. 614 Cooper Bldg.

**T. D. Phelps Grain Co.**

Wholesale Grain and Beans.

**The Summit Grain Co.**

Receivers and shippers of all kinds of grain.  
Wire or phone us.

**The Conley-Ross Grain Co.**

Wholesale Grain and Beans.

**The Crescent Flour Mills**

Merchant Millers and Wholesale Grain.

**Moore-Lawless Grain Co.**

Kansas City, Denver and Atchison.  
Private wires to all markets. Hedging orders solicited.

**Rocky Mountain Grain Co.**

Grain Merchants—Export and Domestic.

Chamber of Commerce  
Members

## MINNEAPOLIS

Chamber of Commerce  
Members

CONSIGNMENTS  
SOLICITED

### INTERNATIONAL GRAIN CO.

COMMISSION  
MERCHANTS

We Are Always in the Market for Wheat  
FLOUR EXCHANGE BLDG. MINNEAPOLIS, MINN.

### MARFIELD GRAIN CO.

Receivers and Shippers

### SHEFFIELD ELEVATOR COMPANY

MINNEAPOLIS

GRAIN SHIPPERS

Ask for Samples of Milling Wheat, Feed and  
Milling Barley  
WRITE FOR QUOTATIONS

### Cereal Grading Co.

GRAIN MERCHANTS

We buy, sell, store and ship  
all kinds of grain. Get our  
offers, or try us with your  
consignments.

LIBERAL ADVANCES

Operators of Elevator "R"

Chamber of Commerce  
MINNEAPOLIS

### CARGILL COMMISSION COMPANY

DULUTH

MINNEAPOLIS

MILWAUKEE

EFFICIENCY is our watchword; SATISFACTION your reward

### SHIP TO CARGILL

"You can't do better; You might do worse."

CORN -- OATS -- BARLEY -- RYE  
For Prompt Shipment in any  
Quantity

VAN DUSEN

The HARRINGTON CO.  
MINNEAPOLIS DULUTH

J. L. McCaull, Pres. R. A. Dinsmore, Vice-Pres.  
S. J. McCaull, Sec. A. M. Dinsmore, Treas.

The McCaull-Dinsmore Co.  
COMMISSION MERCHANTS

915-16-19 Chamber of Commerce  
MINNEAPOLIS, MINN.  
Duluth Milwaukee Omaha

### CIPHER CODES

We carry the following cipher codes in stock  
and can make prompt delivery

Universal Grain Code, board cover... \$1.50  
Universal Grain Code, flexible leather... 3.00  
Robinson's Cipher Code, leather... 2.25  
A. B. C. Code, 5th Edition... 18.00  
Baltimore, Export Cable Code... 15.00  
Companion Cable Code... 5.00  
Miller's Code (1917)... 2.00  
Cross Telegraphic Cipher Code... 2.00

Your name in gilt letters on front cover,  
35 cents extra

For any of the above, address

GRAIN DEALERS JOURNAL

309 So. La Salle St.

Chicago, Ill.



Grain Exchange  
Members

## ST. JOSEPH

Grain Exchange  
Members

# MARSHALL HALL GRAIN CO.

One of the best in the grain trade with experienced organization, best grain handling facilities and up-to-date methods.

OPERATOR MARSHALL HALL GRAIN ELEVATOR, MILLION BUSHEL CAPACITY

## ST. JOSEPH, MO.

The great and growing market in the corner of four GREAT GRAIN states

This combination means SUCCESS AND SATISFACTION to all OUR TRADE!

MARSHALL HALL GRAIN CO.

ST. JOSEPH, MO.

AUNT JEMIMA MILLS COMPANY  
ST. JOSEPH, MO.

Manufacturers

A. J. HOMINY FEED

Button-Simmons Grain Co.

# B-S

BETTER SERVICE  
St. Joseph, Mo.

## Clark's Car Load Grain Tables

Eighth edition, revised and enlarged, shows the following range of reductions of pounds bushels by fifty pound breaks.

20,000 to 107,950 lbs. to 32 lb. bushels
20,000 " 74,950 " " 34 " "
20,000 " 96,950 " " 48 " "
20,000 " 118,950 " " 56 " "
20,000 " 118,950 " " 60 " "

Pounds printed in red ink; bushels in black. Lined ledger paper reinforced with muslin, bound in flexible karatol, marginal index. Price \$2.50.

GRAIN DEALERS JOURNAL  
205 So. La Salle Street CHICAGO, ILL.

## Certain Departments

in this number of the GRAIN DEALERS JOURNAL are especially interesting. After you have read them, consider carefully whether you are not better off with the twenty-four numbers of the Journal, on your desk, or the \$2.00 in your pocket.

Chamber of Commerce  
Members

## BALTIMORE

Chamber of Commerce  
Members

Receivers, Shippers, Exporters

H. C. JONES & CO.

BALTIMORE

Grain and Hay

Consignments or Direct Purchases

CONSIGNMENTS A SPECIALTY

JOHN T. FAHEY & CO.

Commission Merchants

Grain Receivers and Shippers

In the Market every day

Remember us on Rye BALTIMORE, MD.

Established 1900

G. A. HAX & CO.

COMMISSION

Grain and Hay

BALTIMORE

MARYLAND

Chas. England & Co. Inc., Grain-Hay-Seeds  
Commission Merchants - 308-310 Chamber of Commerce, BALTIMORE

GILL & FISHER

Grain Receivers and Shippers

BALTIMORE

Baltimore Grain Co.

Consignments

Baltimore Maryland

## Put Your Name

where every progressive grain dealer will see it and keep it there.

THAT IS IN THE

Grain Dealers Journal

OF CHICAGO

Board of Trade  
Members

## DETROIT

Board of Trade  
Members

CONSIGN

WHEAT - CORN - OATS

-TO-

DUMONT, ROBERTS & CO.

626-8 Murphy Building, Detroit, Mich.

"The top 's the market to you"

SWIFT GRAIN CO.

Murphy Building  
Detroit, Michigan

Consign or Ask Us for Bid

CONSIGN TO

J. S. LAPHAM & CO.

FRED W. BLINN  
Mgr.

Murphy Bldg.  
DETROIT, MICH.



# WICHITA

has long been recognized as the leading market of the Great Southwest. Millers and Exporters when in need of the best quality wheat invariably turn to Wichita to supply their needs. Country Grain Shippers are offered an exceptional service on their grain shipments. Buyers and Sellers of grain should make a Wichita connection. Communicate with any of these firms:

**Smith-McLinden Grain Co.,**  
Milling and Export Wheat, Mill Feed and Coarse Grains

**The Kramer Grain Co.,**  
Wholesale Grain and Feed

**Terminal Elevators,**  
(J. Rosenbaum Grain Co.)  
Exporters—Private wires to all markets

**The J. W. Craig Grain Co.,**  
Milling Wheat

**Linton-Christy, Brokers,**  
No trades for our own account

**Hall Baker Grain Co.**  
Exporters and Merchandisers

**Wallingford Bros.,**  
Export and Domestic Grain

**Raymond Grain Co.,**  
Milling and Export Wheat

**Norris Grain Co.,**  
Exporters

**Claiborne Commission Co.,**  
Consignments and Futures

**Wichita Flour Mills,**  
Millers and Grain Merchants

**Stevens-Scott Grain Co.,**  
Receivers and Shippers

**The Baker-Evans Grain Co.,**  
Milling and Export Wheat, Coarse Grains and Millfeed

**Simonds-Shields-Lonsdale Gr. Co.,**  
Exporters—Good Milling Wheat

**Beyer Grain Co.,**  
Consignments and Mill Orders

**Foot Grain Co.,**  
Consignments and Mill Orders

**I. H. Blood Grain Co.,**  
Receivers and Shippers  
Special attention given to buying wheat for mills

**Wichita Terminal Elevator Co.,**  
General Grain and Elevator Business

Board of Trade  
Members

## PEORIA

Board of Trade  
Members

### MUELLER GRAIN COMPANY

Receivers and Shippers

### GRAIN

Consignments Solicited. Track Bids Made on Request  
Room 39 Chamber of Commerce, Peoria, Ill.

### Universal Grain Code

Designed especially to reduce the telegraph tolls, to prevent expensive errors and to protect the business of grain dealers and millers. Its 150 pages contain 14,910 code words and no two spelled near enough alike to cause an error. Includes Supplement of code words for the new Federal wheat, corn and oats grades.

Code is 4½x7 inches, printed on policy bond, bound in black flexible leather. Price \$3.00.

You can greatly reduce your telegraph tolls by using the Universal. Try it.

### Grain Dealers Journal

309 So. La Salle St. Chicago, Ill.

### P. B. and C. C. Miles

Established - 1875  
Incorporated - 1910

Peoria, Illinois

Handling Grain on Commission Our Specialty

### H. D. BOWEN GRAIN CO.

Receivers and Shippers  
CONSIGNMENTS  
18 BOARD OF TRADE, PEORIA, ILL.

### G. C. McFADDEN & CO.

Merchandisers of Grain  
Shippers of Corn and Oats  
Members Chicago Board of Trade PEORIA, ILL.

### J. C. SHAFFER GRAIN CO.

RECEIVERS and SHIPPERS  
GRAIN . . . . . CHICAGO  
No. 9 Jefferson Building, PEORIA, ILL.  
Branches: Rochelle, Streator, Bloomington,  
Springfield, Hoopeston

### Turner-Hudnut Company

Receivers GRAIN Shippers  
42-47 Board of Trade

Peoria offers a strong outlet for  
NEW CORN

**W. W. DEWEY & SONS**  
COMMISSION MERCHANTS  
26 CHAMBER OF COMMERCE, PEORIA, ILL.

### Elevator Equipment

Tell us what you need for your Grain Elevator and we'll tell you where to get it. We make no charge whatever for this service.  
GRAIN DEALERS JOURNAL, CHICAGO



Commercial Exchange  
Members

## PHILADELPHIA

Commercial Exchange  
Members

**S. H. YOUNG & CO.**  
WHEAT — CORN — OATS  
41 -19 Bourse Bldg.  
CONSIGNMENTS

**E. E. Delp Grain Co.**  
Elevator and Mills---Bourbon, Indiana  
Eastern Office, Philadelphia, Pa.

**RICHARDSON BROS.**  
BROKERS  
WANT OFFERS  
GRAIN FLOUR MILL FEED  
Delivered Philadelphia  
Either Export or Domestic  
The Bourse

### You Know

You want to do business with  
the grain shippers. Tell them so.  
The Grain Dealers Journal  
reaches them.

**L. F. MILLER & SONS**  
Consignments Solicited  
Receivers and Shippers of  
GRAIN, FEED, SEEDS, HAY, ETC.  
Office 2931 N Broad St PHILADELPHIA, PA

*A Kansas dealer, who advertised  
his elevator for sale in the Journal, at  
a stipulated price, received so many  
replies from prospective buyers he  
decided to keep it.*

Board of Trade  
Members

## KANSAS CITY

Board of Trade  
Members

Handling  
Consignments  
and Futures  
43 Years

# B. C. Christopher & Co.

Buyers and  
Shippers Kaffir,  
Feterita, Milo  
Maize

KANSAS CITY, MO.

**SHANNON GRAIN COMPANY**  
CONSIGNMENTS

201-2 Board of Trade KANSAS CITY, MO.



Buyers—Sellers  
WHEAT . CORN  
OATS . BARLEY  
CONSIGNMENTS  
MILL ORDERS

**Yes Sir:** Real  
Service  
We Handle Consignments  
**S. H. Miller Grain Co.**  
Kansas City Missouri

**HALL-BAKER GRAIN CO**

Buyers and Sellers of Grain  
CONSIGNMENTS

Kansas City - - Missouri

—First in Enterprise!  
—First in Advertising!  
—First in Circulation!  
—First in News!  
The Grain Dealers Journal

TRY  
**FULLER GRAIN CO.**  
Consignment  
Service  
Kansas City Atchison, Kansas

**FEDERAL GRAIN CO.**

Real Service on Consignments  
Buyers and Sellers of  
Wheat, Corn, Oats, Barley,  
Kafir and Milo  
Operators 1,500,000 BU.  
MURRAY ELEVATOR  
BOARD OF TRADE KANSAS CITY, MO.  
U. S. A.

**Simonds-Shields-Lonsdale  
Grain Co.**

QUALITY and SERVICE  
Kansas City, Missouri

R. J. THRESHER EBENEZER S. THRESHER  
**R. J. THRESHER GRAIN CO.**  
Successors to THRESHER FULLER GRAIN CO.  
**GRAIN COMMISSION MERCHANTS**  
Consignments Solicited  
Grain Bought and Sold for Future Delivery  
311-314 Board of Trade, KANSAS CITY, MO.

**MOORE-LAWLESS GRAIN COMPANY**

Consignments—Futures  
KANSAS CITY, MO.

Branch Offices: Atchison, Kansas—Denver, Colorado  
Members: Kansas City, Chicago, St. Louis, Atchison and Denver Exchanges

## CONSIGN

**Ernst-Davis Com. Co.**

Kansas City

**SPECIAL ATTENTION  
GIVEN TO FUTURES**

MEMBERS  
Kansas City Board of Trade  
Chicago Board of Trade  
St. Louis Merchants Ex.

## Drive

Your business. Hitch up with an  
add in the Grain Dealer's Journal.  
You will then have a pleasant and  
profitable ride.

**A. C. DAVIS GRAIN CO.**  
Grain Commission  
Mill Orders a Specialty  
Consignments and Future Orders Solicited  
KANSAS CITY, U. S. A

Consignments  
and  
Futures

**CLAIBORNE COMMISSIONCO.**

"One car leads to another"

338 Glover Bldg.  
KANSAS CITY,  
MO.

By mentioning the Grain Dealers Journal of Chicago when writing its advertisers you  
help it to more efficient work in improving grain trade conditions.



Grain Exchange  
Members

OMAHA

Grain Exchange  
Members

# CONSIGNMENTS SOLICITED

## MILLER-WILSON GRAIN CO.

### GRAIN MERCHANTS

200-201 GRAIN EXCHANGE OMAHA RECEIVERS &amp; SHIPPERS

# CROWELL ELEVATOR COMPANY

Receivers and Shippers

## GRAIN

Consignments Solicited  
OMAHA

# Grain Shippers

and in fact all grain men who are wide awake and on the alert to get onto all the ins and outs of the grain business, subscribe for and read the Grain Dealers Journal.

Buyers and  
SellersWHEAT, CORN  
OATSTWO Terminal  
ElevatorsMillion bushel  
capacity

CHOICE MILLING WHEAT

# CONSIGNMENTS

Produce Exchange  
Members

TOLEDO

Produce Exchange  
Members

# JOHN WICKENHISER & CO.

Wholesale Grain Dealers

TOLEDO, OHIO

We make track bids and quote delivered prices, Solicit Consignments of Grain and Clover Seed, Members Toledo Produce Exchange and Chicago Board of Trade

There is great satisfaction in trusting your CONSIGNMENTS OF GRAIN AND SEED to a firm you KNOW to be RELIABLE,

1887 H. W. DEVORE & CO. 1921  
TOLEDO - OHIO

# Clover Seed

International Game, played in Toledo, Ohio. Providence does dealing. When "Seedy" favor

C. A. KING &amp; CO.

Like Billy Sunday they deal in cash and futures

# If You Have

the interest of your market at heart, support it earnestly, help to advertise it thoroughly, and above all do not convey the impression that it is an indifferent market by giving it 30 cents worth of advertising.

THE GRAIN DEALERS JOURNAL has been an instructive source to me.—Ben Hall, former mgr. Farmers Co-op. Ass'n.

# Clark's Double Indexed Car Register

for car lot dealers

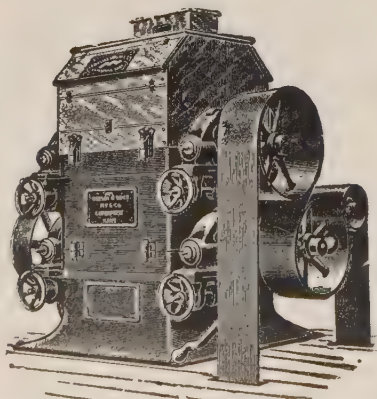
Is a record book designed to afford ready reference to the record of any car number. Facing pages 11x15½" of heavy ledger paper are each ruled into five columns, those on the left-hand page being numbered 0, 1, 2, 3 and 4; while columns on the right-hand page are numbered 5, 6, 7, 8 and 9. Each column is ruled into three distinct divisions with the following sub-headings: "Initial," "Car No." and "Record."

The marginal index figure represents the right hand or unit figure of the number entered; and the column heading the second or tens figure. So that the required number can always be instantly found if properly entered.

Form 40 contains 42 pages, bound in heavy canvas covers with spaces for registering 13,200 cars. Price, \$2.00. Weight 1¾ lbs.

FORM 42 contains 72 pages, bound in art canvas covers with spaces for registering 21,600 cars. Price, \$3.00. Weight 2¾ lbs.

Grain Dealers Journal, 309 So. La Salle St., Chicago, Ill.



# More Profits

The elevator owner who installs a feed mill in his elevator puts himself in line for more profits. No other sideline is as profitable. Your farmer patrons must have feed for stock. Are you going to let them go to your competitor? Drop us a line asking for further particulars regarding a feed mill for your elevator.

J. B. Ehrsam & Sons Mfg. Co.  
Enterprise, Kansas

# Grain Receiving LEDGER

A book designed for use by Grain Buyers who keep individual accounts with farmer patrons. Is ruled for facts regarding wagon loads received. Its column headings being: Date, Article, Gross, Tare, Net, Bushels and Pounds, Price, Debit, Credit and Remarks.

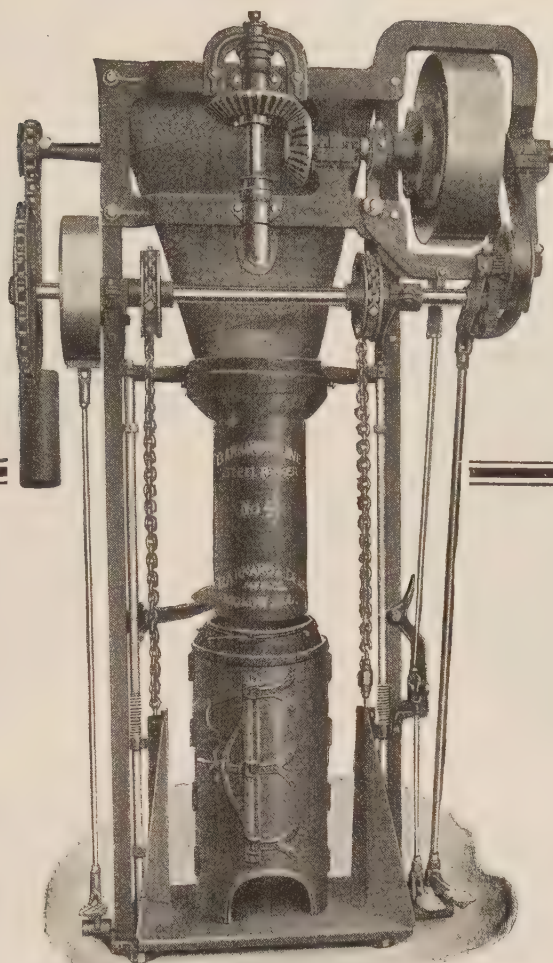
Each of its 204 pages of linen ledger paper, size, 8¼x13½ inches, is ruled for 42 wagon loads and numbered. Each page may be used for one or more accounts as desired. A marginal index is bound in front. Bound in cloth with leather back and corners. Order Form 43.

Price, \$3.35

Grain Dealers Journal

309 So. La Salle St., CHICAGO, ILL.





## BARNARD-MOLINE STEEL PACKER

For Packing Feeds of All Kinds, Barley or Oat Hulls, Grits, Etc.

Has heavy auger shaft and double expansion driving clutch.

Heavy lifting chains run over large sheaves so arranged that the pull of the carriage is exactly in line with the work, thus eliminating friction.

Open type carriage permits operators to work from front or rear or both sides of machine.

Carriage guides are provided with spiral cushion springs to neutralize the terminal shock of the ascending carriage.

Complete foot control, leaving hands free for handling sacks. Emergency hand-lever for disengaging clutch.



**BARNARD & LEAS MFG. CO.**

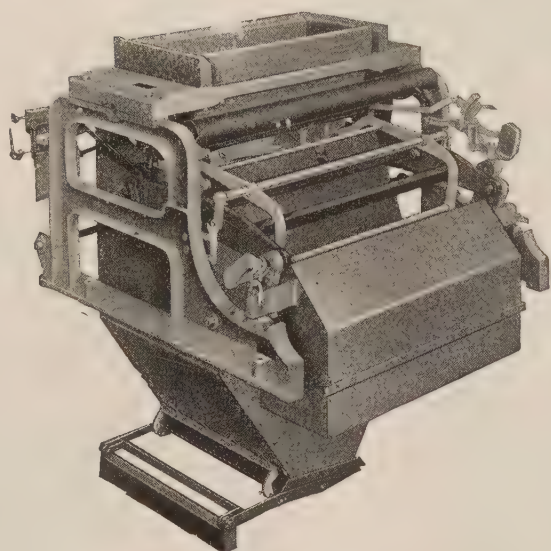
**MILL BUILDERS AND  
MILL FURNISHERS**

ESTABLISHED 1860. MOLINE, ILLINOIS, U.S.A.





No Adding or Recording  
of Weight Necessary  
When You Use



## The New Richardson All-Automatic Grain Shipping Scale

Positively requires no hand-adjustments  
to insure its accuracy.

### Choke-Proof and Self-Compensating A RICHARDSON

combines every essential feature of an  
entirely adequate AUTOMATIC SHIP-  
PING SCALE for the country house.

Built to I. C. C. specifications.

MAN-MADE ERRORS IN WEIGHT  
ARE ENTIRELY AVOIDED and  
Shipper is furnished with an accurate,  
mechanically printed record of every  
carload shipment.

*Take Advantage of Our  
Bargain Prices.*

**Richardson Scale Company**  
Passaic, New Jersey

Chicago

Minneapolis

Omaha

Wichita

## Dust Collectors



alone do  
not prevent  
explosions  
in Eleva-  
tors, but

## DAY

Dust Col-  
lecting Sys-  
tems do  
when prop-  
erly in-  
stalled.

## The Day Company

1006 Lyndale Avenue N.

Minneapolis, Minn.

## WHAT DO YOU NEED?

to modernize your plant so it will minimize  
your labor and increase your profits? Is it here?

Account Books	Herringbone Reduction Gears
Attrition Mill	Lightning Rods
Bag Closing Machine	Manlift
Bags and Burlap	Moisture Testers
Bearings { Ball	Mustard Seed Separator
Plain	Oat Bleachers and Purifiers
Roller	Oat Clipper
Belting	Painting or Repairing
Boots	Pneumatic Conveying Equipm't
Buckets	Portable Elevator
Car Liners	Power { Kerosene Engine
Car Loader	Gas Engine
Car Mover	Motors
Car Puller	Power Shovel
Car Seals	Railroad Claim Books
Cleaner	Renewable Fuse
Clover Huller	Rolls for Cracking Corn
Coal Conveyor	Sample Envelopes
Conveying Machinery	Scales
Distributor	Scale Tickets
Dockage Tester	Scarifying Machine
Dump { Auto Truck	Self Contained Flour Mill
Wagon	Separator
Dust Collector	Sheller
Dust Protector	Sieves
Elevator Brooms	Siding-Roofing { Asbestos
Elevator Leg	Steel
Elevator Paint	Silent Chain Drive
Feed Mill	Spouting
Fire Barrels	Storage Tanks
Fire Extinguishers	Testing Apparatus
Grain Driers	Transmission Machinery
Grain Tables	Transmission Rope

or anything used in a grain elevator.

Draw a line through the supplies wanted, and write  
us regarding your contemplated improvements or  
changes. We will place you in communication with  
reputable firms specializing in what you need, to  
the end that you will receive information regarding  
the latest and best.

## INFORMATION BUREAU

Grain Dealers Journal, 309 So. La Salle St., Chicago



**I**f your weights don't hold out—and you need a new scale, write us. You can lose nothing by giving consideration to the proposition we have to offer. No matter what your personal opinion on scales is, you ought to post yourself on the *Bird Scale*.

Remember the interests of your elevator. The protection of your shipping weights is more important than the convenience of yourself and your man.

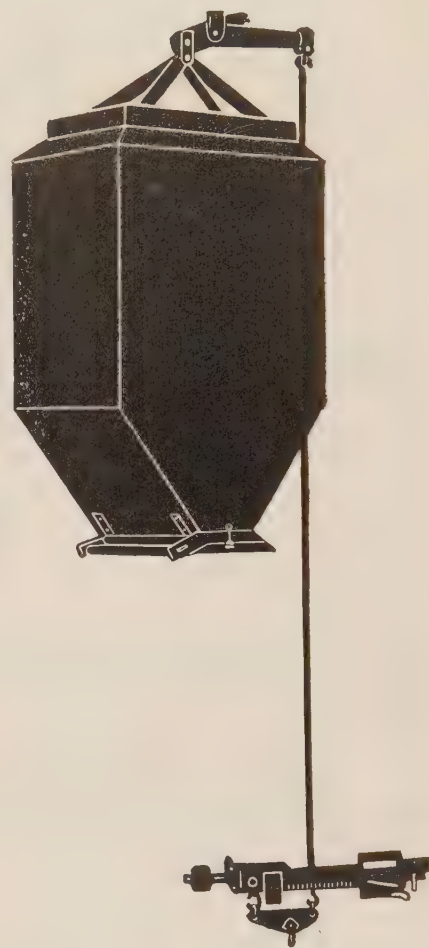
because not only does it weigh correctly, but its mechanical design and system is such that it does not give any one chance to contest your weights.

The operation of the Bird Scale in an elevator is independent of all conditions that ordinary automatic and hopper scales are subject to.

Whether you ultimately buy a Bird Scale or not, post yourself on it. Let us show you how it will work in your elevator. Give us a chance to discuss your weight troubles.

**Everything for Every Mill and Elevator**

## Great Falls, Mont.



Gentlemen: We are interested in shipping scales. Will you please tell us more about the "Bird." We are now

using a ..... hopper { scale,  
automatic }

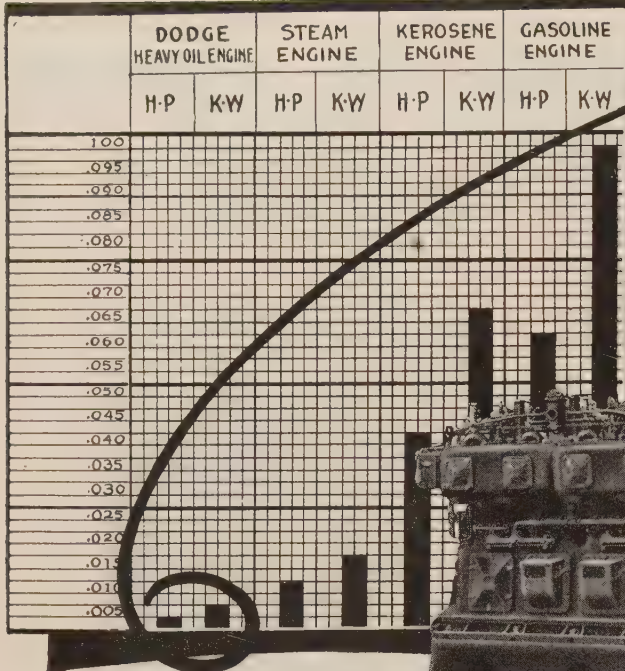
Mgr. ....

Elevator .....

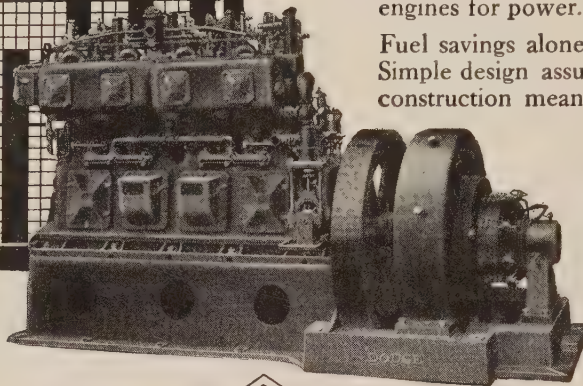
Address .....

# BIRD SCALE





This cost comparison is based on 50 H. P. engine driving a 30 KW generator with oil engine fuel at five cents per gallon, coal at \$5.50 per ton, kerosene at twenty cents per gallon and gasoline at thirty cents per gallon.



# DODGE

HEAVY OIL ENGINE

*Can you afford to pay more than this for power?*

The chart shows you at a glance the saving that can be made in *your* elevator by using Dodge Heavy Oil engines for power.

Fuel savings alone will quickly pay for the plant. Simple design assures low attendance costs—sturdy construction means low upkeep.

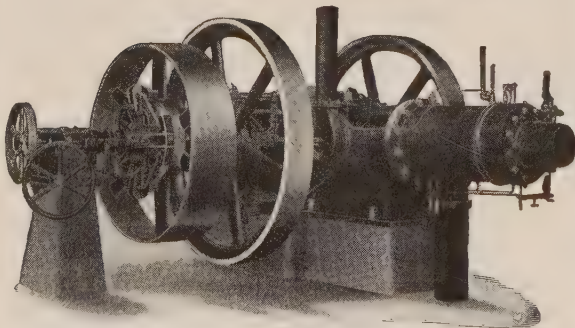
These engines start on low pressure air—combustion is accomplished by compression only. There are no electric torches, carburetor, igniters, timers, etc., No hot bulb or ball.

The reputation of the world wide Dodge organization recognized for over forty years in the power transmission field is your insurance of service. It stands solidly behind every installation. Write for full particulars today.

**Dodge Sales and Engineering Company, Mishawaka, Ind., U.S.A.**

## MUNCIE

*Heavy Duty*  
**Oil Engine**



USE CRUDE OIL AND FUEL OIL

Reduce Your Fuel Bill 80 Percent  
Sizes 10 to 250 H. P.

**MUNCIE OIL ENGINE CO.**  
MUNCIE, IND., U.S.A.

Branches: Atlanta, Ga. Dallas, Tex. Export Dept.  
36-40 W. 60th St., N. Y. City

## WONDER GRAIN CLEANER

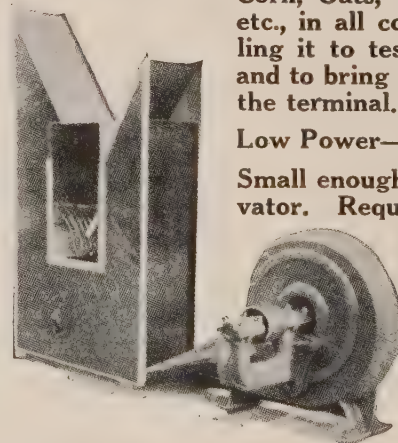
(PATENTED)

CLEANS, COOLS, DRIES, CONDITIONS

Corn, Oats, Wheat, Barley, etc., in all conditions, enabling it to test higher grade and to bring better prices at the terminal.

Low Power—High Capacity.

Small enough to fit any elevator. Requires very little space—Easy to install.



CIRCULAR, DESCRIBING, SHOWING TESTS AND COST OF OPERATION SENT ON REQUEST.

**WELLER MFG. CO.**  
CHICAGO

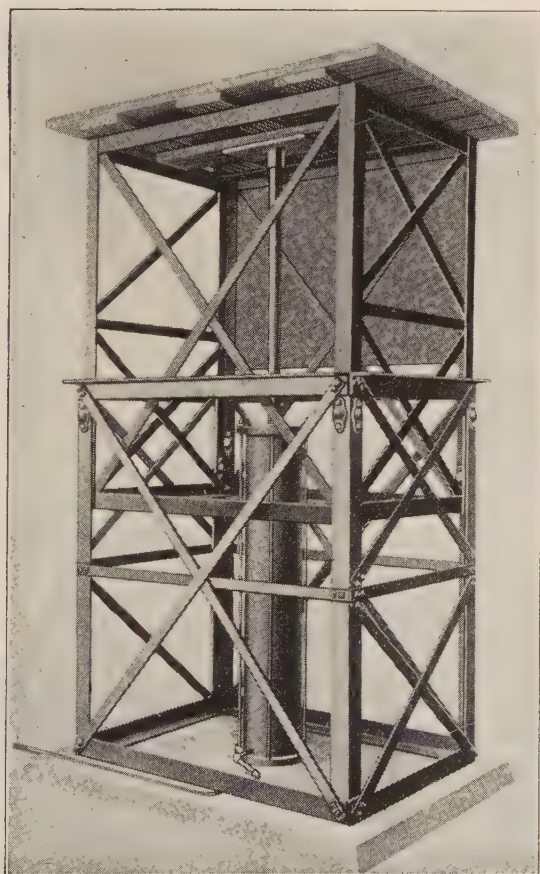
SALES OFFICES:  
NEW YORK BOSTON BALTIMORE PITTSBURGH  
CLEVELAND SALT LAKE CITY SAN FRANCISCO



# Kewanee *All Steel* Truck Lift

Costs *less* installed than any other

The Chief Engineer of Nye, Schneider & Jenks Co., who operate many elevators, says: "*The Kewanee Truck Lift is much cheaper and easier installed than any truck lift we have used.*"



Kewanee *All Steel* Truck Lift raised. Notice the husky steel frames—and the steel ball bearings on which the inner frame slides *smoothly* up and down.

In selecting your Lift will you keep these two things in mind?

**FIRST:** A Kewanee Truck Lift is *all steel*. It will last as long as your elevator. And there is never any upkeep cost.

**SECOND:** It costs you *less* installed than any other reliable device.

**Kewanee Implement Co.**

Kewanee, Illinois

*Southwestern Distributors:*

Fairbanks, Morse & Co., Kansas City, Mo.

**Kewanee Implement Co.**

521 Commercial St., Kewanee, Ill.

Tell me about the Kewanee All Steel Truck Lift, which never gets out of order. I understand this will not obligate me in any way.

Name .....

Address .....



**DINGS MAGNETIC SEPARATORS**

Remove tramp iron and steel from grain before it goes into the feed grinder. Prevent dust explosions and fires, breakage of rolls and damage to grinding faces. **WRITE FOR BULLETIN.**

**DINGS MAGNETIC SEPARATOR CO.**  
642 Smith Street, Milwaukee, Wis.

For elevator and mill supplies we issue a net price catalog. If in the market write us for one.

**WHITE ★ STAR ★ CO.**  
WICHITA, KANSAS

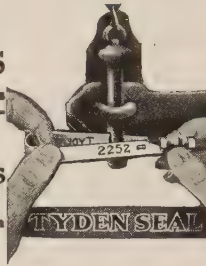
**TYDEN CAR SEALS**

Bearing shipper's name and consecutive numbers.

Prevent  
**CLAIM LOSSES**  
10,000 SHIPPERS  
Are now using them

Write for samples and prices

**INTERNATIONAL SEAL & LOCK CO.**  
Chas. J. Webb, Vice-President  
617 Railway Exchange Bldg., Chicago, Ill.



**CONE-SHAPE GRINDERS**

**It PAYS to GRIND ALL GRAINS**

Look to the Grinders. They do the work! Bowsher's Cone-Shape grinders are the correct principle in Feed Mill construction. They mean larger grinding surface close to center of shaft; thus More Capacity, Lighter Draft, Longer Life.

"Desire to express my appreciation of the long-lasting, trouble-proof Bowsher. Have used a No. 4 ten years with less than One Dollar per year for repairs." *E. W. Watt, Jacobsburg, O.*

10 sizes; 2 to 25 H. P. Write for free catalogue.

**N. P. BOWSHER CO., SOUTH BEND, IND.**



## We Stand or Fall By This Test

Have a letter written on any of the standard makes of typewriters.

Then have the same letter written on a Woodstock.

Ask any competent critic to pick out the neatest letter.

The reason is built in the machine.

(Ask for Demonstration)

**Woodstock Typewriter Co.**

33 North Dearborn Street  
Chicago, U. S. A.

The value of an "ad" is not measured by what it costs, but by what it pays the advertiser.

# CARTER

## DISC SEPARATOR

### Increases Test Weight of Wheat

**A** RUN of wheat through the Carter Disc Separator not only cleans it, but increases its test weight.

The scouring action of the discs upon the wheat knocks off fuzz and light particles from the kernels and makes it more dense.

**The result is an average of one pound per bushel increase in test weight.**

Wherever installed, the Carter makes a cleaner separation of oats and barley from wheat, in one run through, than has ever been possible heretofore.

Made for these separations: **The A type machine** separates oats and barley from wheat, oats and barley from rye, or seeds and wheat from oats. **The Seed type machine** removes wild peas, cockle and seed from wheat. Also combination type to remove oats and seeds in one operation.

### How the Carter Reduces Your Grain Cleaning Costs

It eliminates all sieves, brushes, air suction, shaker devices and dust.

It operates steadily with small horsepower. Requires little or no attention. The few simple working parts are enclosed in dust-tight housing and run in oil. It takes little room. Low installation cost—no dust collectors. **The cost to keep the Carter in repair is practically nothing.**

### TRY IT AT OUR RISK

Here's our guarantee: If, after a reasonable trial it is not satisfactory to you in all respects, we agree to accept its return and give you full credit for it.

**Write for full information.** Learn what the Carter is doing for other elevators and how it can save you hundreds of dollars annually.

**CARTER-MAYHEW MFG. COMPANY**

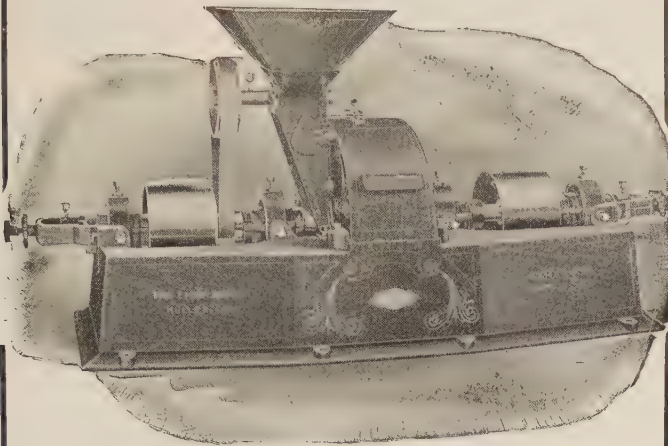
611 S. 5th St., Minneapolis, Minn.

In Canada: Manufactured and sold by The Strong-Scott Mfg. Co., Ltd., Winnipeg





## The "HALSTEAD" HAS NO EQUAL



No Seal Rings      Positive Feed  
Scientific      Economical  
Wick Oiler Bearings

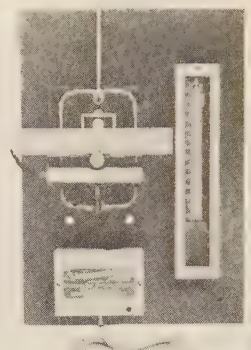
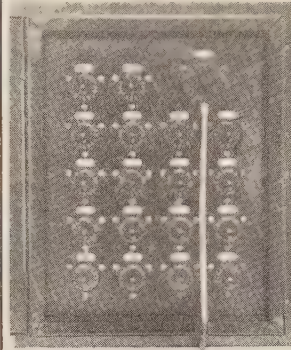
Its best friend is the man who has used other makes.

Grinding Plates alike on both sides, and being reversible, gives FOUR cutting edges.

Highest efficiency at the smallest expense.

**THE ENGELBERG HULLER CO.**

SYRACUSE, N. Y., U. S. A.



## The "ZELENY" Protects Your Grain

*A Few  
Zeleny  
Installations*

Cargill Grain Co.  
Pillsbury Flour  
Mills  
Bartlett Frazier  
Co.  
Updike Grain  
Co.  
Armour Grain  
Co.  
Larabee Flour  
Mills  
New Orleans  
Public  
Elevators  
Maney Milling  
Co.  
Buckeye Cotton  
Oil Co.  
Red Star Milling  
Co.

It is a simple device for testing the condition of grain stored in bins or tanks, by giving at all times the accurate temperature of the grain, not merely at the bottom and the top of the bins, but at intervals of five feet up through the bins. It saves you money by eliminating unnecessary turning of grain, which entails shrinkage, time, labor, power and wear on machinery; prevents bin-burned grain; increases working capacity of plants by saving time.

Further data will be furnished on request.

**Western Fire Appliance Works**  
542 S. Dearborn St.      CHICAGO

# Why you should buy 40 degree motors

A so-called single rated 50 degree motor sells for less than a standard 40 degree motor. It should sell for less—it has less material—and of course will give proportionately less service. Note the pictures below. They clearly demonstrate the necessary additional material required to produce a 40 degree motor.

## Fairbanks-Morse Motors Are 40-Degree Machines

### COMPARE THE GUARANTEES

This is the 50 degree "continuous rated" temperature guarantee:—

Temperature rise full load continuously...50°c  
No overload guarantee.

This is the Fairbanks-Morse temperature guarantee:—

Temperature rise full load continuously...40°c  
25% overload for 2 hours .....55°c

### COMPARE THE WEIGHT

This is the size of a 30 H. P. 1800 R. P. M. motor designed to meet the 50 degree guarantee.

Net weight, 620 lbs.

This is the size of a Fairbanks-Morse 30 H. P. 1800 R. P. M. 40 degree motor.

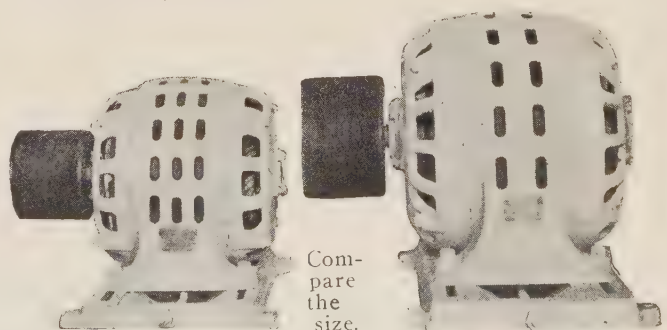
Net weight, 834 lbs.



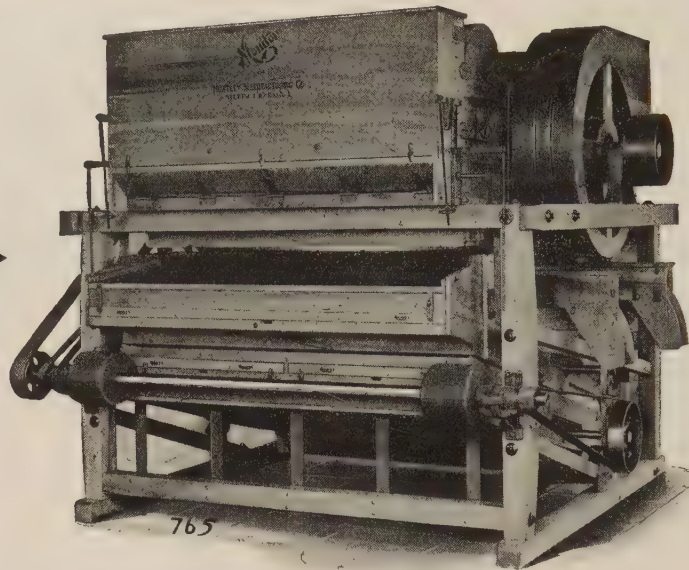
The feeling of safety and confidence that goes with overload capacity, lower temperatures, higher torque and better all around performance of the 40 degree motor is worth far more than you pay for it.

**Fairbanks, Morse & Co.**  
MANUFACTURERS      CHICAGO

THE CANADIAN FAIRBANKS-MORSE CO., LTD., MONTREAL





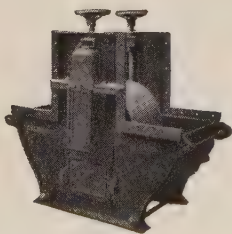
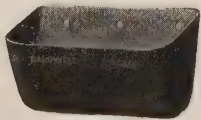


Notice how conveniently screens can be changed in the MONITOR Separators. Turn the lock button and pull them out at the head end. Another evidence of thoughtfulness for the user's convenience. A MONITOR has everything worth having. Make your next separator a MONITOR. It's the file leader of them all.

Canadian Plant,  
Huntley Mfg. Co., Ltd.  
Tillsonburg, Ont.

## HUNTLEY MFG. CO.

Department B  
SILVER CREEK, N. Y.  
(In writing, mention department)



# CALDWELL SERVICE

HALF a million dollars worth of well selected stock, constantly maintained, and an organization keyed up to the theory that plant efficiency is measured by the number of orders shipped on the day of receipt, accounts for Caldwell service.

If you need gears, sprockets; transmission machinery, Helicoid Conveyor or any of the Caldwell specialties promptly, wire Caldwell, or call up the nearest Link-Belt office. You will find Link-Belt Company offices in all principal cities.

## H. W. CALDWELL & SON CO.

LINK-BELT COMPANY, OWNER

CHICAGO, 17th Street and Western Avenue

DALLAS, TEXAS, 709 Main Street

NEW YORK, 299 Broadway

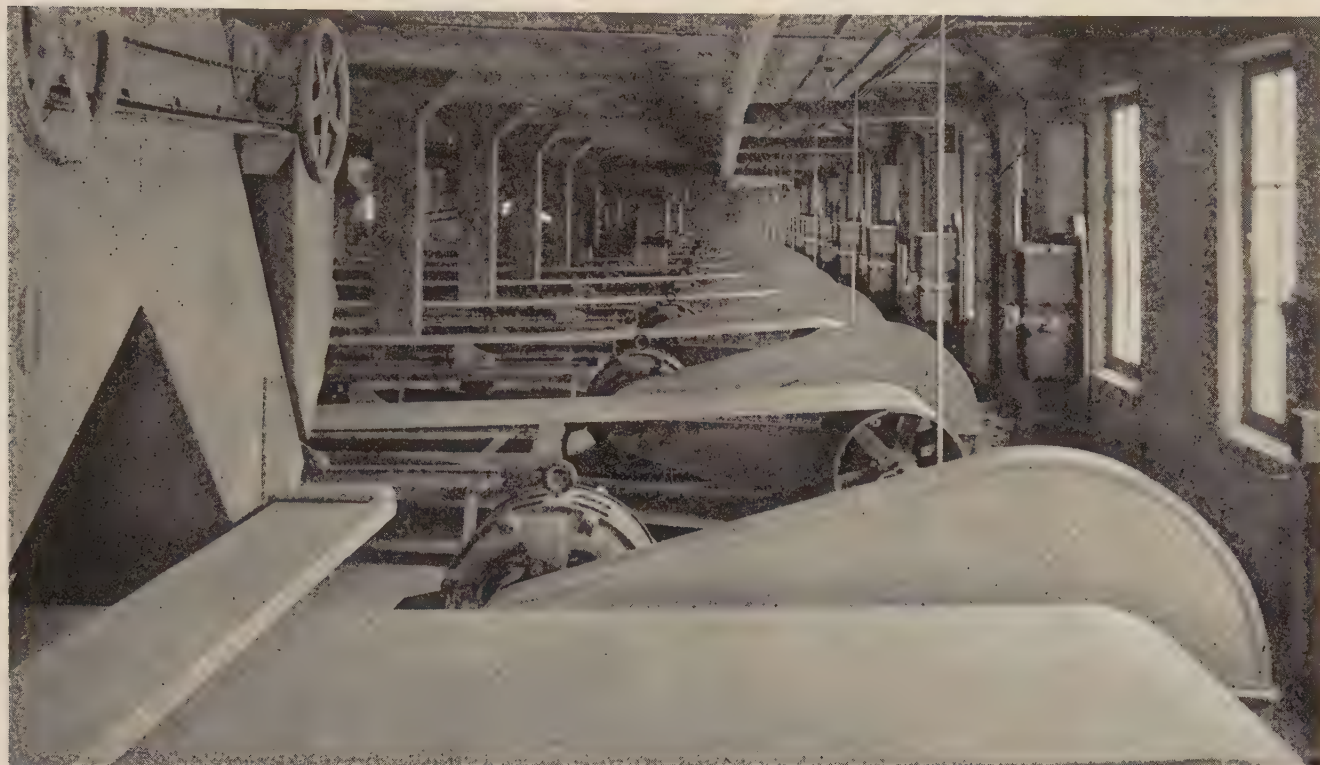


# CALDWELL



# MORSE CHAIN DRIVES

SILENT CHAIN  
THE MORSE "ROCKER JOINT"



13 Morse Silent Chain Drives Transmitting Power from Motors to Conveyors Above Storage Bins, No. Central Elevator, Baltimore.

IT was not by chance that 79 Morse Silent Chain Drives, totaling 2525 h.p. were selected as the sole transmission in the Northern Central Elevator at Baltimore—for all motors driving the grain conveyor belts. Every known transmission was thoroughly canvassed before decision was made, and in view of the splendid results obtained over a long period of years with Morse drives installed in all the largest elevators built and equipped by the leading construction engineers, Morse equipment was ordered because it was believed it would conform to the high efficiency standard better than any other.

The installation of Morse Silent Chain Drives makes sure the economies of power transmission in grain elevator operation discussed elsewhere in this number of this publication.

Morse Silent Chain Drive has attained its leading position by results; has proven its efficiency, its durability, its low maintenance; it has increased production and lowered cost; it has brought out the concealed profits of slipping belts wherever the 3,000,000 h. p. now in use has been installed.

*What are your transmission problems?—Submit them to us*

BENEFIT BY MORSE SERVICE AS OTHERS DO

**MORSE CHAIN CO.,**

LARGEST MANUFACTURERS OF  
SILENT CHAINS IN THE WORLD

**ITHACA, N. Y.**

MORSE ENGINEERING SERVICE

ASSISTANCE WITHOUT OBLIGATION

Address Nearest Office



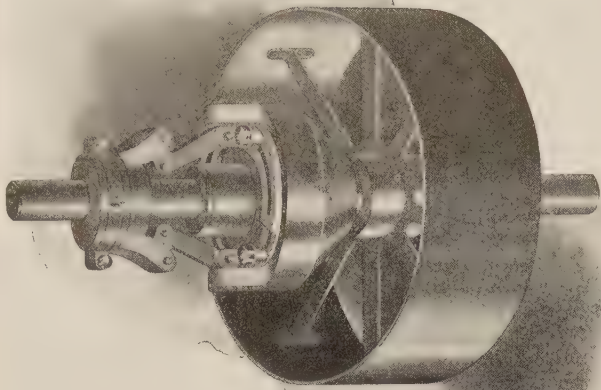
BALTIMORE.....1402 Lexington Bldg.  
BOSTON.....141 Milk St.  
CHICAGO.....Merchants L & T Bldg.  
CLEVELAND.....Engineers' Bldg.  
DETROIT.....1361 Abbot St.  
CHARLOTTE, N. C.....404 Commercial Bank Bldg.  
NEW YORK.....50 Church St.  
PHILADELPHIA, PA.....Fuller Bldg.  
PITTSBURGH.....Westinghouse Bldg.  
SAN FRANCISCO.....Monadnock Bldg.

MONTREAL, St. Nicholas Bldg., Jones & Glassco, Reg'd  
TORONTO, Bank of Hamilton Bldg.....  
ATLANTA, GA., Earl F. Scott & Co., 702 Candler Bldg.  
KANSAS CITY, MO., Morse Eng. Co., Finance Bldg.  
MINNEAPOLIS, MINN., Strong-Scott Mfg. Co.,  
.....413 3d St. S.  
ST. LOUIS, MO., Morse Eng. Co., Chemical Bldg.  
WINNIPEG....Strong Scott Mfg. Co., Dufferin St.



**"Morse" Is the Guarantee Always Behind the Efficiency, Durability and Service**





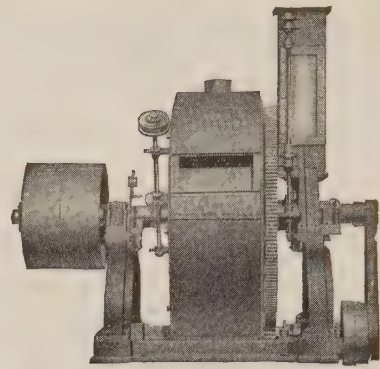
## "Peerless" Friction Clutches

HAVE STOOD THE TEST FOR YEARS  
and we can assure you complete satisfaction

*Write us for circular and prices*

OUR STOCK OF SUPPLIES  
FOR MILLS and ELEVATORS  
IS ALWAYS COMPLETE

**ESSMUELLER MILL FUR. CO.**  
1216-1224 So. 8th St. ST. LOUIS, MO.



## FOR PEARLING BARLEY PEPPER WHEAT

Use Triumph Pearlors if you want to produce pearled barley, or wheat or pepper. They will turn out a product that cannot be beaten.

Full information gladly furnished those interested

**THE C. O. BARTLETT & SNOW CO.**  
Main Office and Works: Cleveland, Ohio

No. 1193

## Fabricated Steel Products

We specialize on FABRICATED STEEL PRODUCTS and are equipped to furnish steel plate products such as tanks, hoppers, stacks, conveyors, chutes, pipe, elevator legs, coal mine equipment, cement and concrete sheet steel forms promptly. Let us estimate on your requirements.

## Corrugated Sheets Erected

We are specialists in furnishing and erecting ROOFING & SIDING of galvanized, painted or zinc sheets, corrugated or formed. Our mechanics are experts—they know how. Let us figure on your erection, no matter where located.

*Our complete stock of galvanized, black, blue annealed sheet steel and zinc enable us to give immediate attention to all orders and inquiries received.*

**The Sykes Company**  
930 West 19th Place, Chicago, Ill.

## We Make a SPECIAL BUSINESS of REPAIR WORK

*Our Repair Crews for*  
**REMODELING and OVER-  
HAULING GRAIN ELEVATORS**  
*Go All Over The Grain Territory*

*If you have any changes in view, write us and we will send an engineer, without cost to you to estimate your work.*

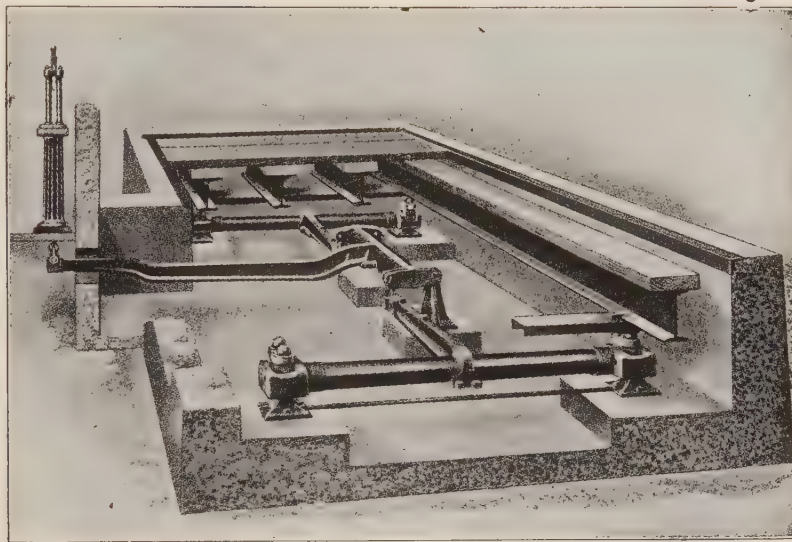
**GRAIN DEALERS SUPPLY CO.**  
**MINNEAPOLIS MINNESOTA**  
BRANCHES  
FT. DODGE, IA... HASTINGS, NEBR... ABERDEEN, S.D... FARGO, N.D.



# Howe Ball Bearing Auto Truck and Wagon Scales

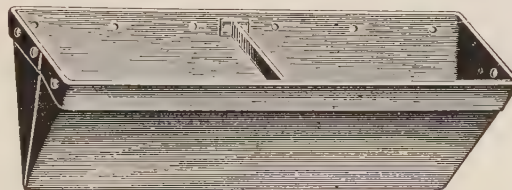
The cut below shows our **Special** 10-Ton Auto Truck and Wagon Scale for Country Elevators and Coal Yards. Platform 16x8 and Full **Heavy Steel Four I Beam Construction**, with Angle Iron Outside Frame.

H  
O  
W  
E

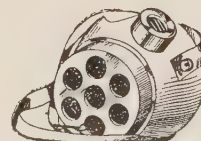
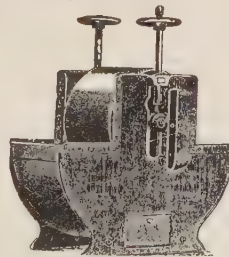
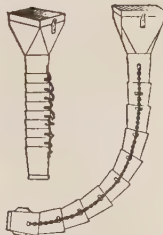
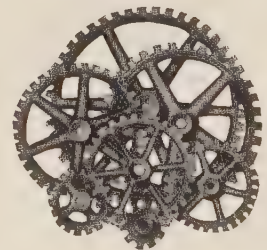


H  
O  
W  
E

Over **200** of these Special Scales sold in Nebraska and Iowa in 1920. Send for this list. Write users and get their opinions of this **Special** Scale.



Minneapolis V Buckets  
Salem & Empire Buckets, Large Stock



Dust Protectors



Complete stocks of all kinds of Pulleys, Belting, Sprockets, Loading Spouts, Grain Spouting and everything for a complete elevator. Write us.

**AMERICAN SUPPLY & MACHINERY CO.**  
O M A H A      1102 Farnam Street      N E B R .

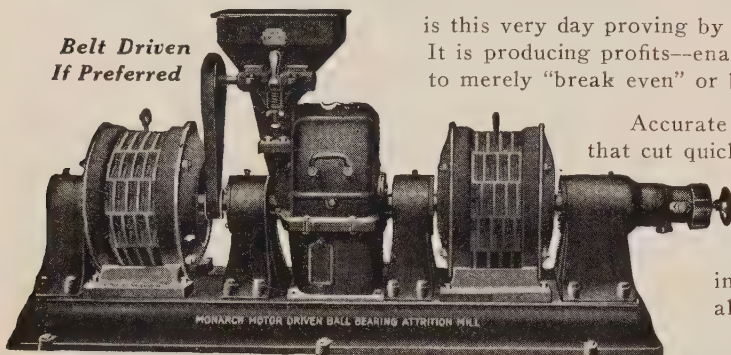


# A Practical Power Saver

Nothing saps profits so quickly and so surely in feed grinding plants as grinders that require an exorbitant amount of power. For every unit of power consumed there should be produced a finished product in sufficient volume to not only pay for the power, but to have an ample margin of profit. And unless a feed grinder accomplishes this, it is a veritable failure. The

## MONARCH BALL BEARING ATTRITION MILL

*Belt Driven  
If Preferred*



is this very day proving by performance its power-saving value in hundreds of plants. It is producing profits—enabling its owners to **make money**, instead of allowing them to merely “break even” or burdening them with an actual loss.

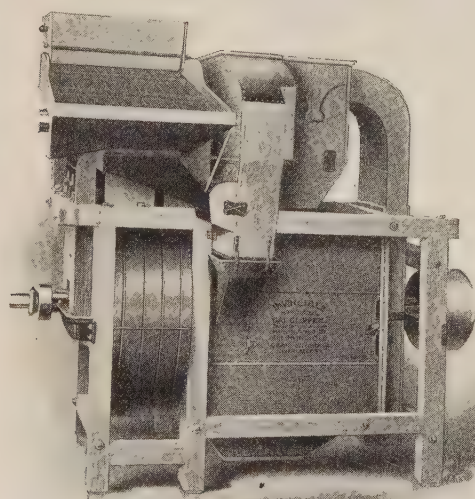
Accurate balance, bearings that prevent friction, grinding plates that cut quick and clean, a feeder that controls the flow of stock to the plates perfectly—these are some of the features that contribute materially to economical operation.

If the grinders you are now using are **greedy** for power, investigate the merits of the Monarch. Send today for Catalogue D-120.

KANSAS CITY OFFICE:  
203 New England Building

SPROUT, WALDRON & COMPANY, 1202 Sherman St., Muncy, Pa.  
*The Monarch Mill Builders*

CHICAGO OFFICE:  
No. 9 South Clinton Street



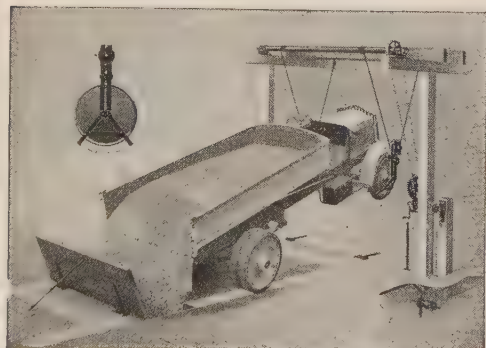
## INVINCIBLE OAT CLIPPER

*A Machine of Quality*

WRITE FOR INFORMATION

**Invincible Grain Cleaner Co.**  
SILVER CREEK, N. Y.

## TRUCK AND WAGON DUMP



**Simple  
Durable  
Practical  
Safe  
Inexpensive  
Substantial**

**Easily Installed, Operated by  
Hand or Power. For further  
information address**

**L. J. McMILLIN, 525 BOARD OF TRADE, INDIANAPOLIS, INDIANA**  
*Designer and Builder of Grain Elevators*

## Grain Scale Book

Form 23 is an Indexed Journal, keeps a record of 10,000 wagon loads. Each man's loads are entered on his page. It keeps a record of scale weights. From it both debits and credits are posted to ledger, crediting the customer with the amount received and charging it to the grain's account.

The book is ruled with column headings as follows: Date; L. F.; L. F.; Kind of Grain; Remarks; Gross; Tare; Net; Bushels; Pounds; Price; Amount.

The book contains 240 pages, size 10½x15½ inches, of Atlas linen ledger paper. A 28-page index in front. Extra heavy cloth covers with leather back. **Price, \$4.50**

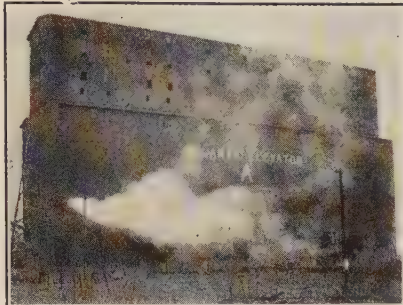
## GRAIN DEALERS JOURNAL

**315 So. La Salle Street CHICAGO, ILL.**





**SIDNEY ELEVATORS AND MAN LIFTS**  
are Money Makers  
They will reduce your handling expense and speed up your work. Easily installed. For quotations give your requirements.  
**SIDNEY ELEVATOR MFG. CO.**  
Sidney, Ohio



### PAINT ECONOMY

is not the price paid "per gallon," but the years of service given. CONSIDER—

### DIXON'S SILICA-GRAPHITE PAINT

when buying a protective paint. It has unusual qualities for protecting metal and wood surfaces. An unequalled record of over 50 years.

Remember the Dixon Company manufactures the paint in FIRST QUALITY only, a guarantee of satisfaction, reliability, service, and economy. If interested, write us for long service records and descriptive literature and booklet 15B.

**JOSEPH DIXON CRUCIBLE COMPANY**

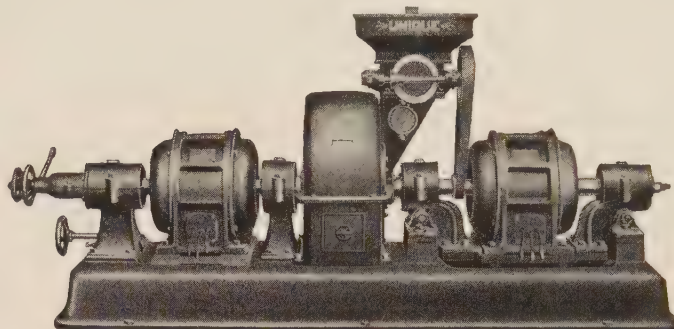
JERSEY CITY, N. J.

Established 1827



# YOU CAN GRIND

from 1 ton to 15 tons an hour with one of these Mills depending on the size.



(Belt Driven If Preferred)

You can make large profits with one of these mills, because they do the work right. They will DO MORE AND BETTER WORK CHEAPER because of special features.

You are looking for a way to increase your income at this time—HERE IS THE WAY. One elevator owner told us that his Unique Mill was the only thing he had made money with during the last two years.

Buy one yourself.

Write **ROBINSON MFG. CO.,** P. O. BOX 411 MUNCY, PA.

Chicago Office: 416 Western Union Bldg.  
456 L St., N. E. .... Minneapolis, Minn.  
1131 S. 2nd St. .... Louisville, Ky.

79 Milk St. .... Boston, Mass.  
3325 Archwood Ave. .... Cleveland, Ohio  
39 Cortland St. .... New York City



"Eureka"

# MUSTARD SEED SEPARATOR

Conceded to be the most ingenious thing ever invented for removing mustard from screenings, grain and seeds.

**Automatic  
No Moving Parts**

**Operates on the  
Gravity Principle**

**Self-Acting  
Requires No Power**

Sold at such a low price that it actually pays for itself in a few weeks.

### READ THIS:

Gentlemen—I have O. K'd the bill for Mustard Seed Cleaner. It is surely a dandy little machine, and does the work to perfection. Wishing you success, I am yours truly,

**STAR & CRESCENT MILLING CO.**

Chicago, Ill.  
W. W. SOPHER, Supt.

*We'll test your samples and show you something interesting*

**S. HOWES COMPANY, Inc.** Silver Creek, N. Y.

European Branch: 64 Mark Lane, London, England





## GRAIN ELEVATOR BUILDERS

### A Reduced Cost of Handling Grain

makes the Best Elevator obtainable a profitable investment.

Ask for Suggestions on Saving Material, Power and Labor, before completing plans for your new elevator.

*30 Years Practical Experience*

**YOUNGLOVE CONSTRUCTION CO.**  
Sioux City, Iowa

### The Eikenberry Construction Co.

329 Unity Bldg., BLOOMINGTON, ILL.

Designers and Builders

### GRAIN ELEVATORS MILLS - COAL POCKETS

in

Concrete, Tile or Wood

Years of experience in this line of work. Write and we will call and give you our proposition and estimate

### THE SPENCER CONSTRUCTION CO.

Garrett Bldg.  
Baltimore, Md.

### BUILDERS

OF

Modern Grain Elevators  
Grain Storage Tanks  
Mill Buildings  
Warehouses

### FEDERAL ENGINEERING CO.

Designers and Builders—Grain Elevators, Mills and Warehouses  
TOPEKA, KANSAS

**BOGGESS CONSTRUCTION CO.**  
204 Express Bldg. Phone F. 252 DECATUR, ILL.

*Builders of*  
GRAIN ELEVATORS and COAL POCKETS  
of the BETTER CLASS  
Special study given to each plant—Each plant fills the individual needs

**The W. H. Wenzholz Construction Co.**  
309 E. 4th Ave., HUTCHINSON, KANSAS

Contractors, Designers and Builders of  
Concrete or Wood Elevators  
JOBBER IN MILL AND ELEVATOR SUPPLIES

### R. M. VAN NESS CONSTRUCTION CO.

Engineers and Builders of

**MODERN WOOD and FIREPROOF ELEVATORS**

We furnish plans and estimates  
Room 3 Grain Exchange

Write us about your requirements  
OMAHA, NEB.

### EFFICIENT ERECTING CO.

We make plans and build up-to-date  
GRAIN ELEVATORS AND MILLS

GEO. H. CRAIG  
386 120th Place, Blue Island, Ill.

### D. F. HOAG & CO.

Designers and Constructors of

### GRAIN ELEVATORS

Corn Exchange, Minneapolis

H. P. Roberts L. D. Roosenbauer

### Southwestern Engineering Company

*Designers and Builders of*  
Modern Mills and  
Elevators

Flour Mill and Elevator Machinery  
SPRINGFIELD, MO.

### The Eberhardt Construction Co.

Engineers and Contractors  
Grain Elevators--Flour Mills--Warehouses  
SALINA, KANSAS

### THE RYAN CONSTRUCTION CO.

3159 Curtis Ave., Omaha, Nebraska  
We build Modern Fireproof Grain Elevators,  
Mill Buildings and Storage Bins  
SPECIAL ATTENTION GIVEN TO REPAIR WORK  
*Let Us Know Your Requirements*

**Your Individual Needs**  
are respected when your elevator  
is designed and built by

**W. H. CRAMER CONSTRUCTION CO.**  
NORTH PLATTE, NEB.  
Write for Details of Our System

### BIRCHARD CONSTRUCTION CO.

CONTRACTORS GRAIN ELEVATORS  
Mills and Warehouses  
Especially Designed for Economy  
of Operation and Maintenance  
704 Terminal Bldg. LINCOLN, NEB.

### A. F. ROBERTS

**ERECTS  
FURNISHES**

ELEVATORS  
CORN MILLS  
WAREHOUSES

PLANS  
ESTIMATES  
MACHINERY

SABETHA

KANSAS

### HOLBROOK, WARREN & ANDREW

Successor to  
Miller, Holbrook, Warren & Co.  
Designing Engineers  
Reinforced Concrete Elevators, Large or Small  
Millikin Building . . . DECATUR, ILL.

### WANT ADS

in the GRAIN DEALERS JOURNAL make wants known to everyone connected with the grain trade. If you desire to buy or rent, sell or lease an elevator or anything used by grain dealers, try a JOURNAL want ad twice a month and your want will soon be satisfied.

**Decatur Construction Co.**  
ENGINEERS AND BUILDERS  
OF GRAIN ELEVATORS  
780-782 Gushard Building  
DECATUR ILLINOIS



## GRAIN ELEVATOR BUILDERS

### SEND US YOUR INQUIRY

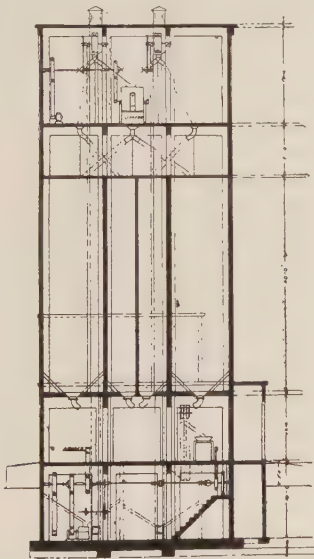
We have the most complete organization in the Northwest for the construction of

#### GRAIN and COAL ELEVATORS

**T. E. Ibberson Company**  
MINNEAPOLIS, MINN.

#### GEO. W. QUICK & SONS

TISKILWA, ILL.  
CONTRACTS and BUILDS  
MODERN GRAIN ELEVATORS  
STORAGE TANKS and COAL POCKETS  
Plans and Estimates Submitted  
Correspondence Solicited



The care and study put into the design and construction of each Reliance Elevator assures the greatest economy in operation. Design No. 1000, side elevation of which is shown above, is especially adapted to the needs of the dealer requiring not over 20,000 bu. capacity. Write for particulars.

**Reliance Construction Co.**  
Board of Trade Indianapolis, Ind.

### You Can Sell Your Elevator

by advertising directly  
to people who want to  
buy, by using a

**Grain Dealers Journal  
Want Ad.**

### HICKOK Construction Co. MINNEAPOLIS ELEVATORS

**P. F. McALLISTER CO.**  
ENGINEERS AND CONTRACTORS  
Grain Elevators, Driers, Coal Chutes  
Wood or Concrete  
BLOOMINGTON, ILL.

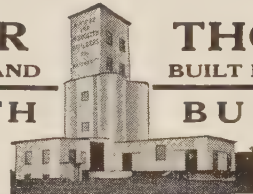
**W. C. BAILEY**  
Contracts and Builds  
Modern Grain Elevators  
We can furnish and install equipment in old or new elevators, guaranteeing greater capacity with less power, and positive Non-Chokable working leg.  
Let us show you  
433 Railway Exchange Bldg., OMAHA, NEB.

FOR  
Concrete Elevators  
**TOWNSEND B. SMITH**  
Decatur, Ill.

**The Star Engineering Co.**  
Wichita, Kansas  
Specialists in Country  
Elevator Construction  
Free Catalogs for Southwest Customers

### ANOTHER DESIGNED AND THE MONOLITH

509 Mutual Building



### THORO-BRED BUILT BY BUILDERS, INC.

Kansas City, Missouri

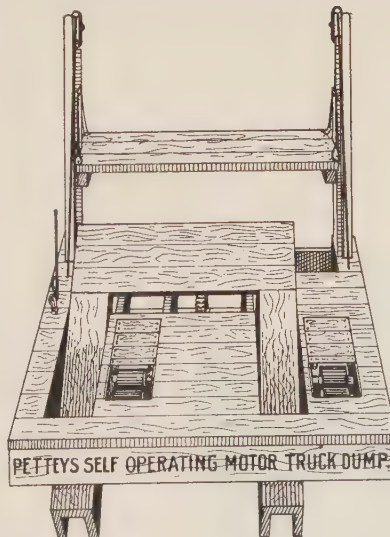
### MACDONALD ENGINEERING CO.

DESIGNERS AND BUILDERS OF  
GRAIN ELEVATORS  
San Francisco Chicago New York  
149 California St. 53 W. Jackson Blvd. 90 West St.

### GEO. A. SAATHOFF

DESIGNER & BUILDER  
OF GRAIN ELEVATORS  
MAYER HOTEL PEORIA, ILL.

### *Randolph Grain Driers* O. W. RANDOLPH CO. TOLEDO OHIO U.S.A.



### Petteys Self-Operating Motor Truck Dump

Is the Dump that is always ready and will do the work.

It does not interfere with your wagon dump.

It is easily installed and easily operated.

It is built for strength and durability.

It requires no power to operate other than that furnished by the truck.

Why stop the truck engine, then furnish other power to operate your dump?

Write for prices and literature

**W. A. Petteys Elevator Machine Co.**  
2020 N. Street LINCOLN, NEBR.



## The Most Modern Elevator in the World



This is an aeroplane view of the Pennsylvania Railroad Company's new Northern Central Elevator No. 3, located at Canton, Baltimore, Maryland, capacity 5,000,000 bushels. This elevator is equipped with

### Four Stewart Link-Belt Grain Car Unloaders

See them in operation and be convinced of their great saving in labor cost.

**James Stewart & Co., Inc.**

Designers and Builders  
GRAIN ELEVATORS  
In All Parts of the World

Grain Elevator Dept., W. R. Sinks, Manager  
1210 Fisher Building, Chicago, Ill.

*"We have built for many of your friends. Eventually we will build for you. Why not now?"*

## GROUP OF TERMINAL ELEVATORS BUILT RECENTLY BY US AT

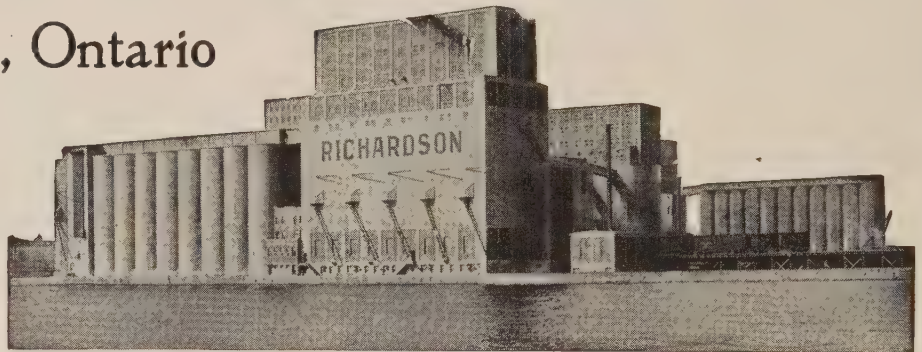
### Port Arthur, Ontario

FOR

The Grain Growers' Grain Company  
Limited.  
The Saskatchewan Co-operative Elevator  
Co., Limited  
The James Richardson & Sons, Limited.

**THE BARNETT-McQUEEN  
COMPANY, LIMITED**

Designers and Builders of GRAIN ELEVATORS  
Offices: Fort William, Ont., Duluth, Minn.  
Minneapolis, Minn.



## Monarch Built Elevators

assure you eco-  
nomical design,  
first class work,  
efficient opera-  
tion.

### SATISFACTION

Let us Submit Designs  
and Prices



Concrete Central Buffalo, 4,500,000 Bu.

One of the modern houses which has made a record for rapid and economical handling

**MONARCH ENGINEERING CO., BUFFALO, N. Y.**



Pennsylvania Railroad Co.'s Terminal  
Elevator at Erie, Pa. 1,250,000 storage  
capacity, with marine leg, 25,000 bu. re-  
ceiving capacity. All concrete, modern  
construction, with latest improvements.

Designed and built under the  
direction of

**Folwell-Ahlskog Co.**

McCormick Bldg. - Chicago, Ill.

Write us for Estimates and Proposals





Buenos Aires Elevator Co.'s Terminal  
Buenos Aires, Argentina

## John S. Metcalf Co.

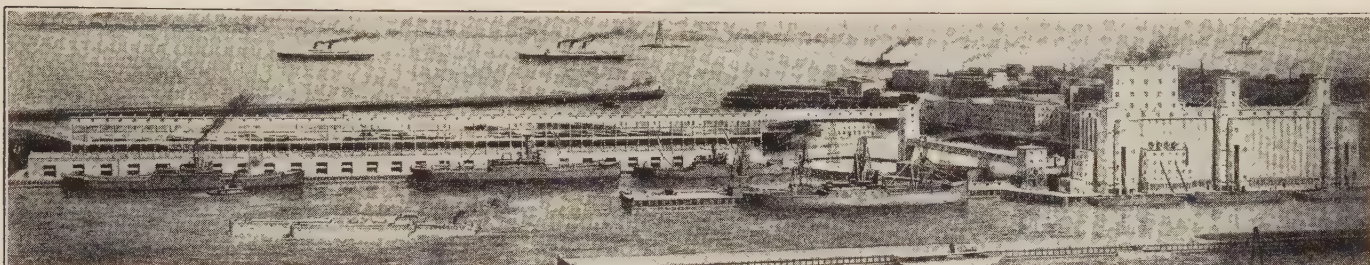
Grain Elevator Engineers

108 South La Salle St.  
CHICAGO, ILL., U. S. A.

395 Collins Street  
MELBOURNE, AUSTRALIA

54 St. Francois Xavier Street  
MONTREAL, CANADA

Calle Maipu 639  
BUENOS AIRES



New York State Barge Canal Terminal Elevator now under construction

**\$148,345.00 saved** by the State of New York in placing contract for this structure with us.  
ADVANCED METHODS—INTENSIVELY DEVELOPED ORGANIZATION—MADE THIS POSSIBLE

**FEGLES CONSTRUCTION COMPANY, Limited**  
Minneapolis, Minn. Fort William, Ontario

**BURRELL ENGINEERING & CONSTRUCTION CO.**  
DESIGNERS AND BUILDERS  
ELEVATORS, FLOUR MILLS AND ASSOCIATED BUILDINGS  
327 South La Salle Street, CHICAGO, ILL.

**L. J. McMILLIN**  
ENGINEER and CONTRACTOR of  
**GRAIN ELEVATORS**  
Any Size or Capacity  
523 Board of Trade Bldg., Indianapolis, Ind.

**L. A. STINSON**  
CONSULTING ENGINEER  
H. E. GODFREY, Civil Engineer  
Elevators  
Mills and Warehouses  
Complete  
National Life Bldg., CHICAGO, ILL.

**LEE PETERSON**  
Marion, Iowa  
Contractor and Builder  
ELEVATORS and MILLS  
REPAIRING A SPECIALTY  
Plans and Specifications Furnished

**YOU—**

Can find no present more acceptable to the progressive grain dealer than a paid up subscription the Grain Dealers Journal.

**HORNER & WYATT**  
Designers of  
Flour Mills and Grain Elevators,  
Warehouses, Power Plants and  
Industrial Buildings.  
Preliminary Sketches and Estimates,  
Valuations and Reports.  
306 McMillen Bldg., Kansas City, Mo

I CONSIDER the Grain Dealers Journal one of the best publications in its line and do not want to miss a single issue.—  
W. E. Munson, Farmers Grain Co., New

## BAD ORDER CARS

cause the loss of many hard earned dollars to shippers of grain and seed.

**MUCH OF THIS LOSS** can be saved by the use of Kennedy Car Liners. These car liners practically condition a bad order car and enable shippers to load cars that otherwise would be rejected.

**KENNEDY SYSTEM** of car liners prevent leakage in transit and we make car liners for all cases of bad order cars, consisting of full Standard Liners, End Liners and Door Liners.

**WILL YOU NOT** give us an opportunity to submit full details of our system and the low cost of same? We are confident this would demonstrate to you the efficiency and money saving merits of our proposition.

**THE KENNEDY CAR LINER @ BAG CO.**  
SHELBYVILLE, IND.  
Canadian Factory at Woodstock, Ontario.



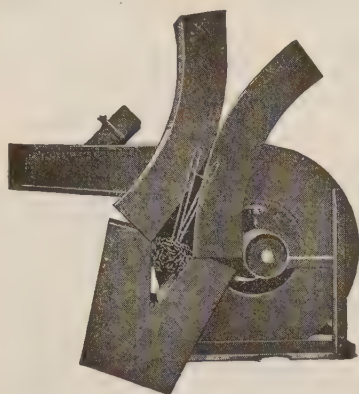
## Folwell-Sinks Form Lifting JACKS

For Grain Elevators and Silo Construction

Manufactured and Sold by

**NELSON MACHINE CO.**  
WAUKEGAN, ILL.





## Small Elevator Plans Free

Suggestive plans for small elevators from 2,000 to 6,000 bushels capacity will be mailed you upon request. These houses are low in height and cost. Grain loaded without scooping and plans include automatic scale, cleaner and Boss Air Blast Car Loader. Just the thing for many small stations.

We can also mail plans for small plants for receiving, storing and shipping corn in the EAR without scooping in the car.

You can make your old house modern by installing a Boss Air Blast Car Loader. Every car can then be loaded without scooping. Our Portable outfits meet many needs. Write today outlining your problems. We will send you complete information free.

Maroa Manufacturing Company, Dept. G, Maroa, Ill., U. S. A.

### Cover's Dust Protector

Rubber Protector, \$2.00

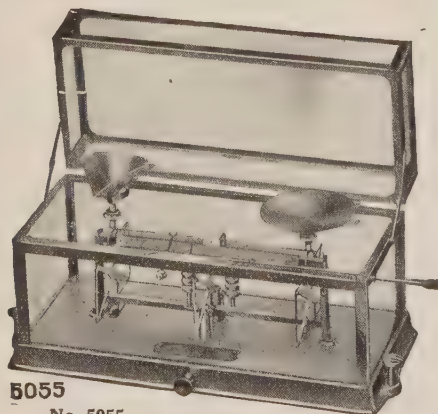
Sent postpaid on receipt price; or on trial to responsible parties. Has automatic valve and fine sponge.

H. S. COVER  
Box 404 South Bend, Ind.



For Accurate Moisture Tests use our Grain Dealers' Air Tight Cans for forwarding your grain samples.  
ST. LOUIS PAPER CAN & TUBE CO.  
ST. LOUIS, MO.

## GRAIN TESTING SCALES



5055

No. 5055

For Grain Testing, Etc.



No. 4000 Used in Moisture Test

SEND FOR CATALOG NO. 35G

### The Torsion Balance Co.

Main Office: 92 READE STREET, NEW YORK CITY

Factory:  
147-153 Eighth Street  
Jersey City, N. J.

Branch:  
31 West Lake Street  
Chicago, Ill.

Branch:  
49 California Street  
San Francisco, Cal.

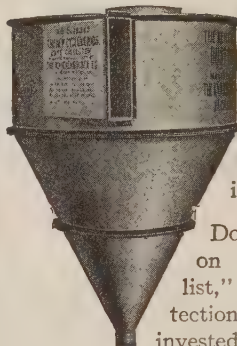
## Receiving and Stock Book

Form 321 is designed for keeping a record of each kind of grain received at a country elevator in a separate column so that the buyer by adding up columns may quickly determine the number of bushels of each kind of grain on hand. Columns are also provided for date, name, gross, tare, net pounds, price, amount paid and remarks.

The book is printed on Linen Ledger paper, well bound with keratol back and corners. Each of its 160 pages is 9x12 inches, giving room for recording 3200 wagon loads. Weight 2 lbs. 5 oz. Price \$2.75.

Grain Dealers Journal 309 South La Salle St., Chicago, Ill.

WHEN EVERY AGENCY FOR SAFETY OPERATION SAYS "DO AWAY WITH DUST" IT'S TIME THAT YOU LISTENED TO REASON—



The hundreds of thousands of dollars lost through dust explosions would equip every elevator in the country.

Don't be the next on the "Blow up list," but for the protection of the money invested in your business investigate our product.

### The New "1905" Cyclone Dust Collector

THE FACTS ARE MIGHTY INTERESTING

The Knickerbocker Co.  
JACKSON, MICH.

## Scale Ticket Copying Book

Contains 150 leaves of scale tickets, four to a leaf. Each leaf folds back and with the use of a sheet of carbon makes a complete and perfect copy of the original on the stub which remains. The original tickets form the outer half of page, so the removal of any ticket does not release the others.

Each ticket has spaces for the following record: No., Date, Load of, From, To, Gross lbs., Tare lbs., Net lbs., Net bu., Price per bu., Test, Man On-Off, and Weigher's Signature. Size 9 1/2 x 11 inches. Printed on good paper. 5 sheets of carbon. Order Form No. 73, \$1.35; weight 2 lbs.

Grain Dealers Journal  
309 So. La Salle St., Chicago, Ill.

## Your Opportunity

is here. Now is the time to let the elevator man know you want his business. Advertise in the

Grain Dealers Journal



# Wanted and For Sale

The rate for advertisements in this department is 25 cents per type line each insertion

## ELEVATORS FOR SALE.

20,000 bushel elevator for sale; large territory to draw from; good crops. Henry Hafner, Menno, So. Dak.

**TWO ELEVATORS** for sale, with good side lines, on main line railroad. Address 48A7, Grain Dealers Journal, Chicago, Ill.

**CENTRAL INDIANA**—Good elevator, flour, feed and coal business for sale. Worth getting after quick. A. H. Richner, Crawfordsville, Ind.

**SO. DAKOTA** grain elevator, fully equipped, 25,000 bushels, wagon dump and hopper scales, gas engine, coal sheds; price \$2,000. C. J. Ward 514 Ashton Boul., Rockford, Ill.

**SOUTHERN OKLAHOMA** elevator for sale. Priced right if taken at once. Good coal business; large territory. Write for particulars. 47Y29, Grain Dealers Journal, Chicago.

A former Iowa elevator owner who advertised his plant in our "Elevators For Sale" columns writes in as follows: "I sold my plant to the first party answering my ad which I had in the Journal."

**CENTRAL ILLINOIS** 20,000 bu. one man elevator, cribbed construction, Howe wagon scales in outside office; also good dwelling. Price and terms right. Address 48C3, Grain Dealers Journal, Chicago, Ill.

## BARGAIN IF TAKEN AT ONCE.

**CENTRAL ILLINOIS** 15,000 bu. elevator, electric power, coal shed, office and wagon scales, all on my own ground. Address 48E6, Grain Dealers Journal, Chicago, Ill.

**SO. DAKOTA**—Good cribbed 20,000 cap. elevator in Corsica, Douglas County, eastern S. Dak., for sale. Good territory to draw from. Was offered \$6,000 in 1918, will sacrifice now for \$4,500. Write to Jos. D. Hofer Elvtr. Co., Freeman, So. Dak.

**CENTRAL INDIANA** 20,000-bu. elevator and 5,000-ton coal business for sale; located in Frankfort, Ind., on our own ground. Failing health of Mr. Frantz, our manager, reason for selling. A first class proposition. T. E. Frantz Grain & Coal Co., Frankfort, Ind.

**MINNESOTA** elevator and former malt plant at Minneapolis for sale. Plant in splendid condition. Fine switching facilities. Will sell at a sacrifice for quick sale.

The Title Guarantee & Trust Co., Cincinnati, Ohio.

**CENTRAL IOWA**—Six elevators on Chicago, Great Western R. R., handling grain, feed and coal; all modern equipment and in first class condition. The opportunity of a lifetime to purchase an old established and money-making business. Address 48D14, Grain Dealers Journal, Chicago, Ill.

**OKLAHOMA**—Modern, up-to-date, cribbed country elevator for sale, with mill buildings and warehouse in connection, on Frisco lines in Oklahoma in a community that raises strictly wheat. Has big trackage, several lots, and best location in town. Address Hunter Mill Co., Hunter, Okla., for price and information.

**ILLINOIS** 20,000-bu. capacity elevator, located on C., B. & Q. R.R., for sale. Good coal and feed business in connection, with new feed house and coal storage. Elevator in fine condition and equipped with electric power, 2 dumps, 2 scales. Exceptionally fine location. Only elevator in town. Priced right. Address 47S15, Grain Dealers Journal, Chicago, Ill.

## ELEVATORS FOR SALE.

**INDIANA**—15,000 bu. cribbed elevator, iron clad, on private ground in southern county seat. Good grain, flour and feed business. Address 48C23, Grain Dealers Journal, Chicago.

**MISSOURI**—15,000 bu. elevator for sale on Wabash R. R., in good territory; electrically operated; only elevator here; carry all side lines; doing good business. Want to retire. Address 47X16, Grain Dealers Journal, Chicago, Ill.

**EASTERN INDIANA**—10,000-bu. elevator and coal yard in town of 1,500 pop. Fine opportunity for man who understands grain and coal business in the biggest little town in Indiana. Terms cash; price right. Address 48D15, Grain Dealers Journal, Chicago, Ill.

**OREGON**—45,000 bu. elevator for sale, built in 1918; 2 warehouses of 25,000 bu. cap. each; handled 120,000 bu. grain last year; no other elevator for 12 miles; located in heart of an irrigation district; good location for side lines. Will sell outright or ½ interest to responsible party and pay him ½ salary to run it. Address 48A14, Grain Dealers Journal, Chicago.

**HERE IS** what one advertiser in our "Elevators For Sale" columns writes us shortly after the third insertion of his ad: "I wish to tell you that my ad in your Journal is the first time I ever tried to find a buyer for anything I had for sale in my life. The old saying 'It pays to advertise' is certainly true. I have several good parties lined up from the many inquiries through my ad in your paper."

**CENTRAL ILLINOIS**—Elevator plants for sale in the garden spot of the state. Land has sold for \$700 an acre. Plant consists of two elevators of 60,000 capacity each, almost new, both cribbed and in fine condition; wired for motor if wanted; now run by 20 h.p. Charter engine; brick engine room, brick oil house; side lines, coal, implements, retail grain business; coal sheds to hold 10 cars soft and 5 cars hard coal; implement bldg. 50x170. No competition any line. Selling account poor health. L. Box 36, Washburn, Ill.

## ELEVATOR FOR SALE OR RENT.

**MINNESOTA** elevator of 25,000 bushels capacity for sale or rent. Located on C. M. & St. P. Ry. Coal and Feed business in connection. Address J. J. Dobie, Mapleton, Minn.

## ELEVATORS WANTED.

**WILL BUY** a well located elevator in the Northwest; might consider other sections. Address 48A2, Grain Dealers Journal, Chicago.

**WANTED**—A small elevator with a good feed business and no competition, located any place in Missouri except extreme southern part. Address 48D19, Grain Dealers Journal, Chicago.

**WILL BUY** an elevator or ½ interest in one located in central or western Ohio. Must be in good grain territory and the price right. Address 48B5, Grain Dealers Journal, Chicago.

## MILL FOR SALE.

**MODERN 100-BARREL MILL** for sale; large territory, Rocky Mountain section; plenty of wheat. Feed mill in connection. Cheap power. Address 48B4, Grain Dealers Journal, Chicago.

## PARTNER WANTED.

**WANTED**—Young man with \$10,000.00 and knowledge of bookkeeping to take a working interest, with official position, in old established milling and grain firm. A splendid opportunity for the right man. For further particulars address 48E7, Grain Dealers Journal, Chicago, Ill.

## ELEVATOR BROKERS.

**JOHN A RICE** **ELMER N. SMITH**  
Elevator Brokers, Frankfort, Indiana.

Several good propositions to offer in elevators in the **FAMOUS MICHIGAN BEAN BELT**. Alfred L. Chamberlain, Broker, Pt. Huron, Mich.

**WANT TO HEAR** from owner having elevator or other business for sale. State cash price and particulars. John J. Black, 57th St., Chippewa Falls, Wisconsin.

## CLAYBAUGH-McCOMAS

Offices

Frankfort, Ind. Indianapolis, Ind.  
223 B. of T. Bldg. 601 Board of Trade.

If you want to buy, sell or trade an elevator write us at either address.

**ALWAYS HAVE ELEVATORS** For Sale in the Grain Belt of Illinois and Eastern Indiana. If you are in the market write me fully and I will try to satisfy you.

**JAMES M. MAGUIRE**,  
432 Postal Tel. Bldg., Chicago, Ill.

## BUSINESS OPPORTUNITIES.

**HAVE** a new patent Compressed Air Dump, the latest out; would sell for some cash and royalty. Address P. W. Mann, care T. E. Ibberson, 300 Corn Exchange, Minneapolis, Minn.

**NEW** all modern eight-room dwelling house in good Southern Minnesota town of five thousand population to trade for good elevator in Northern Iowa or Southern Minnesota. Address P. O. Box 74. Sanborn, Minn.

**WE OFFER FOR SALE** the remaining buildings and the site of elevator. Brick office 12x16x8 ft., coal shed 16x40. A money making business for the right party. For further information write Box 432, Oakes, No. Dak.

**TWO COMPLETE** grain elevators and feed mixing plants, molasses feed units, chicken feed units, hay grinding plant, chop mills, oat crimpers, etc., for sale. Will sell on easy terms. Plants located in best grain centers in the South. For particulars write Kaucher, Hodges & Company, Memphis, Tenn.

## FOR SALE.

640 acres land in Southeast Mississippi, unencumbered, on the Southern Railway, high and dry; good for farming and stock raising. 2,000,000 feet hardwood and pine timber, 300 acres in cultivation, 25 acres in clear cold water lakes stocked with bass, bream and rainbow trout; swimming pools and fountain. 30 to 50 water horse power available. Ideal for winter and summer resort. \$75,000.00 in improvements. Will sacrifice for cash. Might exchange for desirable income property unencumbered. K. C. Hall, Tupelo, Miss.

## FLOUR FOR SALE.

**MIXED CARS** of flour and mill feeds in 100 pound sacks are our specialties. We are now manufacturing a full line of corn goods, cracked corn, feed meal, corn and oats chop, Ohio Farm feed, shelled corn and standard oats in connection with our flouring mill. Would like to send you a trial to convince you of the superiority of our products. Ansted & Burk Co., Springfield, Ohio.



## MACHINES FOR SALE.

**SEPARATOR**—Howes Eureka Dustless, No. 196; used only 2 years and in perfect order. Price \$100.00. A. Walton, Columbia, Va.

**BOSS CAR LOADERS** for sale; several No. 8; good as new; complete, ready to install. Address A. H. Richner, Crawfordsville, Ind.

**COMBINATION Grain Drier** for sprouting grain and steam cooking grain for sale. Ideal for making a dry sprouted grain or dried steam cooked grain for commercial feeds. Address 48D1, Grain Dealers Journal, Chicago, Ill.

## MACHINERY BARGAINS.

One 50 barrel Midget Marvel Mill, fully equipped.

One 130 barrel Standard Wolf Mill with all equipment, including 75 h.p. motor.

Price on both or either 75% less than original cost. Must be seen to be appreciated. Write W. H. Wenholz Constr. Co., Hutchinson, Kans.

## MACHINERY BARGAINS.

Among the items of used machinery that we have in stock are the following:

1 16" Monarch Ball Bearing Belt Driven Attrition Mill.

1 9x16 Unique Three Pair High Roller Mill.

Write us for prices on used machinery and equipment. L. R. Veatch, 418 Prudential Bldg., Buffalo, N. Y.

## FOR SALE.

1 Barnard & Leas Dust Collector.

1 Bran Duster.

1 Cleaning & Smutting Machine.

1 Purifier.

1 Double Reel Bolter.

1 Tubular Boiler, 60 horse power.

1 Flour Packer.

Write for full descriptions.

The Union City Elevator Co., Union City, Ind.

1 No. 230 Standard Cleaner, 8 screens...\$ 50.00

1 No. 131 Standard Cleaner, 6 screens... 60.00

1 No. 132 B. & E. Standard Cleaner, 12

screens ..... 200.00

1 No. 121 Bagger & Standard Cleaner,

10 screens ..... 125.00

1 No. 7 Clipper, 6 screens ..... 35.00

1 No. 6 Clipper, 8 screens ..... 30.00

1 Monarch Receiving Separator ..... 50.00

1 No. 105 Standard Cleaner ..... 20.00

All of the above machines are second hand.

1 No. 2 New Idea, new ..... 35.00

Address 48E14, Grain Dealers Journal, Chicago.

## REAL BARGAINS.

Prompt Attention. Quick Shipments.

When in need of elevator or mill machinery, notify us. We are headquarters for power and transmission equipment, and have on hand several well-known makes of motors, boilers, engines, etc.

Send us list of all your wants. We can supply you with full line of machinery for elevators, flour, corn and cereal mills. Complete equipments for modern mills of all kinds, molasses, stock, and poultry feed plants, plans, specifications, flow sheets, etc., our specialty. Write us without delay.

Geo. J. Noth, Mgr.,

9 S. Clinton St. Chicago, Ill.

## MACHINES FOR SALE.

**DURABLE WIRE ROPE** for sale, for car shovels; cast or plow steel. Manila rope, buckets and everything in elevator supplies.

**PULLEYS**—1,000—for sale. ALL sizes, solid cast iron, wood and steel split. Standard Mill Supply Co., Kansas City, Mo.

## ENGINES FOR SALE.

25 h.p. **FAIRBANKS MORSE OIL ENGINE**, latest type Y, used six months, for sale. Miles Machinery Co., Saginaw, Mich.

**FAIRBANKS MORSE** 20 h. p. special electric gasoline engine; in perfect condition. \$350.00 f. o. b. cars. A. W. Day, Wayzata, Minn.

## STEAM ENGINES, BOILERS.

## BARGAIN FOR QUICK SALE.

One 65 h. p. Center Crank Steam Engine with 80 h. p. High Pressure Boiler (new). Also Double Cylinder Snow Pump and all pipe connections, in first class condition. Write Farmers Union Co-op. Ass'n, Maple Hill, Kansas.

## DYNAMOS—MOTORS.

**DYNAMOS AND MOTORS WANTED**—Buyers of this equipment are reached in largest numbers and at the least expense through the use of the "DYNAMOS-MOTORS" columns of the Grain Dealers Journal,—the medium for power bargains.

## SCALES FOR SALE.

**HOWE SCALE TEST WEIGHTS** for sale. One ton (forty 50-lb. weights); good condition. Priced right. Chas. Love, Macon, Ill.

**SECOND HAND SCALES** for sale of any make, size, or price, always find ready buyers when represented in the "Scales For Sale" columns of the Grain Dealers Journal.

## BAGS—BAGGING—BURLAP.

## GRAIN BAGS FOR SALE.

4,000 second hand cotton grain bags for sale; 16 oz., 25c each f. o. b. St. Louis in large or small lots. Foell & Company, 123 Market street, St. Louis, Mo.

**BURLAP BAGS OF EVERY KIND FOR SALE**; new or second-hand, plain or printed with your brand; seamless Cotton Grain Bags; Sample Bags; Burlap, Cotton Sheeting or Paper for Car Lining, etc. Wanted: Second-hand bags, best prices paid. WM. ROSS & CO., 409 N. Peoria St., Chicago.

## MISCELLANEOUS.

**DEVICE FOR SHIPPING SCALES** (not automatic). Warns you in any part of elevator when draft is ready for car. Material and directions at small cost. H. L. Hayden, Stockett, Mont.

## HELP WANTED.

**ELEVATOR HELPER** of experience wanted; one competent to take full charge at times. Good dwelling and garden; 4 miles from large town and less than 100 miles from Chicago. Handles over 200,000 bu. annually. Give full particulars re experience Illinois. Address 48E11, Grain Dealers Journal, Chicago, Ill.

## HELP WANTED WITH INVESTMENT.

## A MAN.

Wanted—A practical feed man; one acquainted with both manufacturing and marketing. We have a partly equipped plant and want to put in additional machinery to make a small up-to-date plant to take care of local and nearby territory. Most of the grain necessary can be bought locally or nearby. Manufacturing transit arrangements can be had on four through line railroads leading to all points. A splendid location in one of the best cities in Indiana. Ample capital, although we prefer a man who can make a fair sized investment to guarantee his best efforts and permanency of position. This is a rare chance for the proper party. Address 48D6, Grain Dealers Journal, Chicago.

## SITUATIONS WANTED.

**EXPERIENCED** grain man, good executive and bookkeeper, will consider position in central states or south. Address 48E5, Grain Dealers Journal, Chicago, Ill.

**DESIRE** position as manager of mill or elevator with sides lines; 18 years' experience inside and on the road; keep books. Address 48E12, Grain Dealers Journal, Chicago, Ill.

**WANTED**—Position as manager of a farmers elevator company; 10 years' experience in grain, lumber, coal and hardware. Address 48E10, Grain Dealers Journal, Chicago.

**WANTED**—Position by an experienced grain man in a well located farmers elevator after March 8th. None but an A1 place accepted. Address 48A3, Grain Dealers Journal, Chicago.

**POSITION** wanted by successful manager with 3 years' experience with Farmers Union Elevator Co. Experienced in handling side lines. Best references given. Address 48E2, Grain Dealers Journal, Chicago.

**AN ADVERTISER** in our Situations Wanted Columns says after one insertion: "I have so far received about five letters and who knows how many more I will get before the week is over. The Journal is the best advertiser of all the papers I know."

**POSITION** wanted about April 1st, in Colorado or Western Nebraska, by married man 37 years old, with 10 years' experience as manager of a farmers grain, coal and implement business. Best of references. Can give bond. Address 48C5, Grain Dealers Journal, Chicago.

## WOOL WANTED.

**ELEVATOR OPERATORS** who have wool to ship will find it to their advantage to tell the 6700 regular readers what they have to offer. An advertisement in this column will cost you but 25c per type line per insertion.

Since 1893

28 Years  
Manufacturers  
of Scales



## COLUMBIA MOTOR TRUCK SCALES

### Are the BEST—"SAVE REPAIR BILLS"

Because they are easy to build, simple in construction, well made and retain their accuracy longer than any scale on the market. COLUMBIA SCALES are being used by practically every feed, coal, ice and material dealer in Chicago. THERE MUST BE A GOOD REASON.

Telephone Albany 4

2437-43 N. Crawford Avenue

## COLUMBIA SCALE COMPANY

F. Beuckman & Son, Props.

CHICAGO, ILLINOIS

Save money and send for list of our guaranteed rebuilt scales. All makes and capacities. Tell us what you want. Let us repair your scales—any make. We also carry parts. Finest equipment for scale work in Chicago.



## OFFICE APPLIANCES.

**SAFES**—Large stock of new and used safes on hand. Protect your valuable papers. Prices reasonable. The Howe Scale Co. of Ill., 512-514 St. Charles St., St. Louis, Mo.

## ADDRESS WANTED.

**WANT** to learn the whereabouts of L. D. Mitchell, formerly of Paris, Ky. Address 48C13, Grain Dealers Journal, Chicago, Ill.

**PRESENT ADDRESS** of H. S. Masters, formerly of Kansas City, Mo., wanted. Address 48E16, Grain Dealers Journal, Chicago.

## BARGAIN SALE ON SHELF-WORN BOOKS.

These books are slightly soiled and shelf worn. To clear out these books promptly we are offering them at greatly reduced prices.

**Two No. 222Co, Orders for Cars.** These books contain 50 blanks in duplicate for ordering cars in writing from station agent. Carbon copy enables you to keep record of cars ordered. Books are worn from salesmen's usage. Order Form 2222 Co. Price 40 cents each.

**GRAIN DEALERS JOURNAL.**

309 South La Salle St., Chicago, Ill.

## HALL NON-CHOKABLE ELEVATOR LEG

Adds 100% Efficiency to the cup belt. It revolutionizes the system of elevating grain. It is automatic in action.



The grain is fed to it automatically and unerringly without mechanism and is as reliable as gravitation. In consequence of these facts it is 100% MORE DURABLE than other legs, and is GUARANTEED IN YOUR ELEVATOR.

## THE HALL SIGNALING GRAIN DISTRIBUTOR

Our idea is that the Distributor should direct all the grain to the exact spot intended, without mixing, with the least trouble or care, not only now and then, but ALWAYS.

That is the service that the Hall Distributor performs continuously.

**Hall Distributor Company, 222 Railway Exchange Bldg., Omaha, Nebr.**

## Field and Grass Seed Trade Directory

**ARNHEM, HOLLAND.**

Wm. E. Busgers & Co., European fancy natural gr. sds.

**ATCHISON, KANS.**

Manglesdorf Seed Co., The, wholesale seeds.

**BALTIMORE, MD.**

Wm. G. Scarlett & Co., wholesale seed merchants.

**BUFFALO, N. Y.**

Stanford Seed Co., Inc., The, wholesale field seeds. Whitney-Eckstein Seed Co., wholesale seeds.

**CHICAGO, ILL.**

Dickinson Co., The, Albert, seeds. Illinois Seed Co., The, grass and field seeds.

**CINCINNATI, OHIO.**

McCullough's Sons, The J. M., field and garden seeds.

**CONCORDIA, KANS.**

Bowman Bros. Seed Co., field seeds.

**COUNCIL BLUFFS, IOWA.**

Ouren Seed Co., wholesale seeds and grain.

**CRAWFORDSVILLE, IND.**

Crabbs Reynolds Taylor Co., grass and field seeds. Crawfordville Seed Co., seed merchants.

**ELKHART, KANS.**

Muncy & Carson, grain and seeds.

**KANSAS CITY, MO.**

Peppard Seed Co., J. G., wholesale seeds. Tobin Seed Co., alfalfa—bluegrass.

**LOUISVILLE, KY.**

Hardin, Hamilton & Lewman, grain and field seeds. Louisville Seed Co., clover and grasses.

**MILWAUKEE, WIS.**

Courteen Seed Co., field seeds. North American Seed Co., wholesale grass & field seeds.

**MINNEAPOLIS, MINN.**

Dickinson Co., The, Albert, seeds.

**NEW YORK, N. Y.**

Julius Loewith, Inc., grass and field seeds. Nungesser-Dickinson Seed Co., wholesale seed merchants.

**PHILADELPHIA, PA.**

Philadelphia Seed Co., Inc., The, wholesale field seeds.

**ST. LOUIS, MO.**

Agricultural Seed Co., cow peas. Manglesdorf, Ed. F. & Bro., wholesale field seeds.

**ST. PAUL, MINN.**

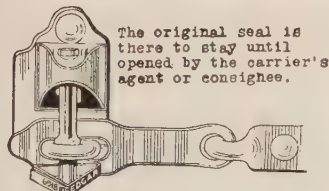
Jameson Hevener Co., shippers of field seeds.

**SIOUX FALLS, S. D.**

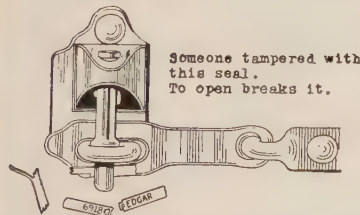
North Western Seed Co., wholesale field seeds.

**TOLEDO, OHIO.**

Churchill Grain & Seed Co., field seed, popcorn. Flower Co., The S. W., seed merchants. Hirsch, Henry, wholesale field seed. Toledo Field Seed Co., The, clover, timothy.



The original seal is there to stay until opened by the carrier's agent or consignee.



Someone tampered with this seal. To open breaks it.

## NEW WAY

Use the 1921 Model

## EDGAR STEEL SEALS

When Shipping Carloads of

Grain, Flour, Steel, Everything

Anything where a part can be taken out. Save the loss. Prevent the necessity of claims by eliminating the temptation to cover up theft.

Send full shipments and know they will get there

**The Edgar Steel Seal & Mfg. Company**  
LAWRENCE, KANSAS

## HAY WANTED.



## Mention This Journal

When you write to any of our Advertisers; you'll get a prompt reply.

## KEEP POSTED

## GRAIN DEALERS' JOURNAL

309 So. La Salle St., Chicago, Ill.

Gentlemen:—In order to keep us posted regarding what is going on in the grain trade outside our office, please send us the *Grain Dealers Journal* on the 10th and 25th of each month. Enclosed find Two Dollars for one year.

Name of Firm.....

Capacity of Elevator.....

Post Office.....

..... bus.

State.....



## SEEDS FOR SALE—WANTED

## SEEDS FOR SALE—WANTED

WANTED—Small car Velvet Chaff Wheat suitable for seed.

S. J. Clausen, Clear Lake, Iowa.

SEED CORN grown from disease-free seed. Only \$2.45 per bushel.

E. G. Lewis Seed Co.,  
Media, Illinois.

CERTIFIED GRIMM ALFALFA AND HUBAM sweet clover for sale at very reasonable prices. Full information on request. Davis Seed Co., St. Peter, Minn.

FOR SALE—Any quantity and quality of Seed you want to purchase. If you don't find what you want in the "Seeds For Sale" section, advertise for it.

ARTHUR G. DUNN,  
82 Wall St., New York.  
Headquarters for SUNFLOWER Seed in carload lots and less than carload lots, spot or future delivery.

SEED BUYERS AND SELLERS can quickly sell any quantity or buy any amount or quality by making their wants known through the "Seeds Wanted—For Sale" columns of the Grain Dealers Journal, Chicago, Ill.

THE BEST dependable varieties of seed corn and seed oats for sale, in any quantity, carload or less. Write for prices.

Square Deal Seed Farm,  
Allen Joslin, Prop.,  
Holstein, Iowa.

## COW PEAS

## Agricultural Seed Company

Representing 57 Years'  
Continuous Seed Service

Main and O'Fallon Sts. ST. LOUIS, MO.

COURTEEN  
SEED CO.

Milwaukee,  
Wisconsin  
Clover, Timothy, Grass Seed  
Grain Bags

If you want regular country ship-  
pers to become familiar with your  
firm name, place your "ad" here.

## J. G. PEPPARD SEED COMPANY

Buyers SEEDS Sellers

Correspondence Invited

KANSAS CITY, MO.

## WHITNEY-ECKSTEIN SEED CO.

Wholesale Seed Merchants

BUFFALO, N. Y.

CORRESPONDENCE INVITED

## CRAWFORDSVILLE SEED COMPANY

CRAWFORDSVILLE, INDIANA

We are in the market for Red Clover. We can use seed mixed with Buckhorn. Mail samples with lowest prices.

Members Wholesale Grass Seed Dealers' Association.

## Council Bluffs Seed Co.

SEED CORN--NOTHING ELSE

Standard Iowa and Nebraska  
Varieties. Ensilage

Council Bluffs

Iowa

## The J. M. McCullough's Sons Co.

BUYERS — SELLERS

Field and Garden Seeds

CINCINNATI - - OHIO

## HENRY HIRSCH

WHOLESALE FIELD SEEDS

CLOVER — ALSIKE — TIMOTHY — ALFALFA

Our Specialty

All Other Field Seeds

TOLEDO - - OHIO

Missouri Grown Blue Grass  
Kansas Grown Alfalfa, New Crop

We are now prepared to accept orders for both

TOBIN SEED CO.

KANSAS CITY, MO.

## OUREN SEED CO.

Council Bluffs, Iowa

Buy and Sell Red, White and Alsike  
Clovers, White and Yellow Blossom  
Sweet Clover, Alfalfa, Red Top, Blue  
Grass and all Seed Grains

## Crabbs Reynolds Taylor Company

CRAWFORDSVILLE, INDIANA

Buyers and Sellers

CLOVER AND TIMOTHY SEED — GRAIN

## North American Seed Co.

WHOLESALE GRASS & FIELD SEEDS

Milwaukee, Wisc.

"THE HOUSE OF QUALITY"

## LOUISVILLE SEED COMPANY

INCORPORATED

LOUISVILLE, KY.

Headquarters for

RED TOP AND ORCHARD GRASS

BUYERS AND SELLERS

OF ALL VARIETIES FIELD SEEDS

IMPORTERS

EXPORTERS

GRASS and  
CLOVER SEED

Buyers and Sellers of Timothy, Red Clover,  
Alsike, Alfalfa, White Clover, etc.

NUNGESSER-DICKINSON SEED CO.

New York, N. Y., U. S. A.

## The Toledo Field Seed Co.

Clover and Timothy Seed

Consignments solicited

Send us your samples

TOLEDO, OHIO

## The Mangelsdorf Seed Co.

Sweet Clover, Alfalfa,

Soudan Grass, Millet, Rape.

ATCHISON

KANSAS

## The S. W. Flower Co.

WHOLESALE

FIELD SEED

MERCHANTS

SPECIALTIES

RED CLOVER, TIMOTHY  
ALSIKE

TOLEDO  
OHIO

## HEADQUARTERS

on all

Imported

Clover

Grass and Field

SEEDS

Julius Loewith, Inc.

150 Nassau Street New York, N. Y.

(Formerly Loewith, Larson & Co.)



## SEEDS FOR SALE—WANTED



### KROP-KING. Brings an Extra Profit

**E**LEVATORS handling KROP-KING for the first time soon find that profits in the seed business are not confined alone to the profits made on sales.

For example, this famous seed—naturally drought-resisting and high in purity and germination—invariably produces bigger crops.

Bigger crops mean bigger shipments for you, of course. And there lies one extra profit.

Naturally, by strengthening the producing power of farms, KROP-KING also stimulates the buying of more of the other merchandise you sell. Extra profit here, too.

Why not let us send you our complete plan of selling co-operation which is making "Seed Headquarters" of many elevators with whom we are working. Write today.

### MILWAUKEE SEED CO.

116 West Water Street, Milwaukee, Wis.

*Wholesale Field and Grass Seeds*

### CROP-INSURANCE SEEDS

### THE ILLINOIS SEED CO.

CHICAGO, ILL.

WE BUY AND SELL

### Field Seeds

*Ask for Prices*

*Mail Samples for Bids*

# SEED

*We Buy  
and Sell  
all Varieties  
of Grass  
and Field  
Seeds*

**The Albert Dickinson Co.**  
MINNEAPOLIS CHICAGO

### RUDY PATRICK SEED CO.

BUYERS AND SELLERS

Alfalfa, Sweet Clover, Red Clover  
Timothy, Sudan, Millet and Cane  
KANSAS CITY, MO.

# SEEDS

Any And Every Kind  
Carload and Less

THE NEBRASKA SEED COMPANY, OMAHA, NEB.

### The Stanford Seed Company, Inc.

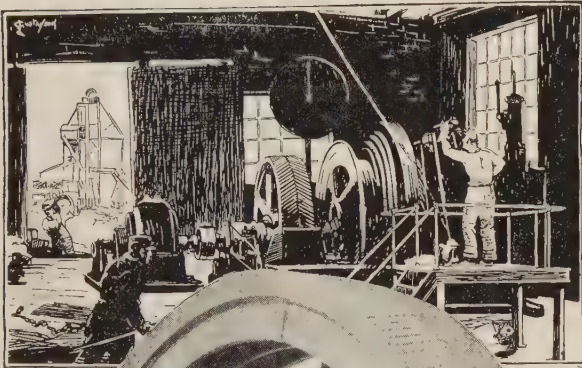
Wholesale Field Seeds :: BUFFALO, N. Y.

MARKLE, IND.—The Grain Dealers Journal has become second nature to me. I still take it for its good information on subjects in which I have been interested for over 30 years.—J. F. Plice (formerly in the grain business at Markle)



# FALK

## HERRINGBONE GEARS



### A Service for Better Elevator Operation

**W**E have always maintained a staff of engineers competent to solve transmission problems in grain elevator operation, whether a leg drive or gear reduction to individual machine. Send us your transmission problems.

You can depend upon Falk Engineering Service for an Economical and Efficient Solution.

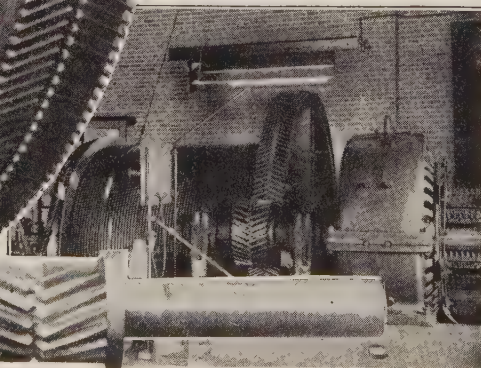
**The Falk Corporation**  
Milwaukee, Wisconsin

#### Representatives:

W. O. Beyer, 1007 Park Bldg., Pittsburgh, Pa.; M. P. Fillingham, 50 Church St., New York City; F. W. Grimwood, Rialto Bldg., San Francisco, Cal.; Vulcan Iron Works, Wilkes-Barre, Pa.; Denver Engineering Works, Denver, Colo.; Engineering Equipment Co., Ltd., 619-623 New Birks Bldg., Montreal, Quebec, Canada.

#### Foreign Representative:

Gustav Melms, 3 Rue Taitbout, Paris.





## GRAIN DEALERS JOURNAL

309 So. LaSalle Street, Chicago, Ill., U. S. A.  
Charles S. Clark, Manager

Published on the 10th and 25th of each month in the interests of better business methods and improved handling facilities for progressive wholesale dealers in grain and field seeds.

**SUBSCRIPTION RATES** to United States, semi-monthly, one year, cash with order, \$2.00; two years, \$3.60; three years, \$5.00; single copy, 15c.

To Foreign Countries within the Postal Union, Canada and Mexico, prepaid, \$2.75.

**THE ADVERTISING** value of the Grain Dealers Journal as a medium for reaching progressive grain dealers and elevator men is unquestioned. The character and number of advertisements in each number tell of its worth. If you would be classed with the leading firms catering to the wholesale grain trade, place your announcements in the Journal.

Advertisements of meritorious grain elevator machinery and supplies and of responsible firms who seek to serve grain dealers are solicited. We will not knowingly permit our pages to be used by irresponsible firms for advertising a fake or a swindle.

**LETTERS** on subjects of interest to those engaged in the grain trade, news items, reports on crops, grain movement, new grain firms, new grain elevators, contemplated improvements, grain receipts, shipments, and cars leaking grain in transit, are always welcome. Let us hear from you.

**QUERIES** for grain trade information not found in the Journal are invited. Address "Asked-Answered" department. The service is free.

### CHICAGO, MARCH 10, 1922

**HAVE YOU** a little Radiophone in your elevator?

**FORGET** not thy supply of new Bs/L on the 15th day of the present month.

**OPEN DRIVEWAYS** invite tramps, smoking and fires. If averse to protecting your property, why insure it? Lock the doors every night.

**TAXPAYERS** who feel able to stand for new and more burdensome charges should wire their representatives lest they vote against one of the many thousands of taxing bills now pending.

**TIME** yet remains for filing straight overcharge claims growing out of freight shipments made during the period of government control of the railroads. Better do it now. Sept. 1 is only around the corner.

**IF MORE** shippers would report cars seen leaking grain in transit to our Leak department more of their brothers would be able to collect for grain lost in transit and carriers would exercise greater care in preventing such leaks.

**THE DECISION** of the U. S. Supreme Court denying the authority of Wisconsin's Railroad Commission to revoke orders of the Interstate Commerce Commission affecting intrastate rates seems to deprive all state railroad commissions of authority over freight and passenger rates, so little will be left for the state commissions to do unless the trunk lines are broken up into state units as was the Standard Oil Co.

**WHEAT LOSSES** due to price fixing in 1917 are still a live question with those directly concerned. Maybe the use of the word "bonus," or the term "adjusted compensation," would insure more favorable consideration by Congress.

**BUCKET SHOP** operators suffered such heavy losses in the markets recently as to drive 40 otherwise responsible fakers to the wall. While New York was the headquarters for most of these bucket shop operators, branch offices were maintained in many western cities. The crop of suckers is so large that it seems very probable that all of the defunct concerns will open up shortly under new names.

**FREE SEEDS** that were not by any means free to the taxpayers' treasury appear to have been removed from the materials for repairing congressional political fences. The practice of free garden seed distribution never served a useful purpose, except perhaps to members of congress and to owners of junk seeds for which it furnished an outlet. Let it be hoped that the practice is dead forever.

**THE GOVERNMENT** will take possession of much of the farm lands bot by farmers with long time loans made under the new plan of the Ohio Farm Buro, when the prices of such land and the earnings thereof sink in the course of years to the point where interest can not be paid on present inflated values. Instead of getting in deeper debt aided by fool friends the farmer will be wiser to liquidate on the rising prices of 1922-23.

**THE SCALE** of discounts adopted by wheat dealers in the Southwest during the war, and described by the term "government scale," has caused more trouble and difficulty in the handling of the 1921 wheat crop than any other single factor. The scale is indefensible under present market conditions, and even if there was an excuse for adopting it at the time the Grain Corporation established its price schedule that excuse no longer exists. It should be discontinued before the new crop moves to market.

**THE BEST** friend of the farmer and the farmers elevator is the terminal market grain dealer, in the opinion of Pres. Croninger, of the Ohio Farmers Grain Dealers Ass'n, as expressed to the recent convention of that organization. Eventually every intelligent and fair minded farmer will recognize that the grain trade as a whole and as at present constituted is the best and truest friend of agriculture as a whole. Few would hold a contrary opinion even now if it were not for self-seeking agitators and false leaders.

**CONTINUOUS** official market quotations by radiophone free of charge to every one who sets up a receiving apparatus should sound good to every grain dealer who has been paying a large sum monthly for the C. N. D. markets or phoning the branch offices for the latest markets. Not only will the new service reduce the cost of getting the markets but it will also save much time to all concerned. The service should help to produce additional business for the sending market, because many more dealers will be kept posted regarding the market changes than ever before.

**WHEN PLANNING** your spring improvements, do not overlook the fact that our Information Bureau will be glad to assist you in finding any machine or supplies which may be needed. Do not hesitate to call upon us at all times.

**RAILROADS** that earned more than 6% are to be required to pay the excess into a fund to be held by the government and to be used for lending to roads not earning that minimum. Is there a reader who does not think it would be an excellent plan to require his competitors to contribute to a fund for his assistance when he gets in deep water financially? Maybe the government will get around to average persons and firms when it gets done pampering the railroads and the farmers.

**THE SEASON** of greatest activity in the building and improvement of grain elevators is at hand, and already reports of new construction are coming to hand. The native optimism of genuine Americans is coming to the fore, and one of the first principles it realizes is that grain will be produced and that it must be handled. Obviously, preparation must precede the actual handling, and the trade everywhere is getting ready for the service it and it alone can render efficiently and economically.

**IN ANCIENT** Greece, according to the historian Grote, any citizen of a certain city was privileged to introduce a new bill in the legislative assembly. But in proposing his bill, he was required to stand before the assembly with a rope about his neck. If the bill was approved as one that would prove beneficial to the public the rope was removed; if it was disapproved the rope was not removed—until afterward. That may explain why this particular Grecian city was not overrun with demagogues; and it may yet become necessary to revive the practice in some more modern legislatures.

**THE ORGANIZATION** of a com'ite to study grain dust explosions and to devise means for the elimination of the hazard in grain handling plants should receive the assistance and encouragement of every person interested in the trade. There will come a time when dust explosions will be looked upon as occurrences attendant only upon the existence of barbarous conditions, and the coming of that time will be hastened by earnest efforts to attack the problem with zealous determination to make grain handling plants safe against catastrophes which are known to be preventable.

**FREE SEEDS** to the extent of \$1,000,000 will be granted to Senator Ladd's constituents in North Dakota if the free seeds appropriation bill passed in the House this morning becomes a law. When passed by the Senate this same bill provided for an appropriation of \$5,000,000, but the friends of economy succeeded in having it reduced to \$1,000,000, and when this amount was passed by the lower house less than two-fifths of the faithful members of that body were recorded as voting. Evidently few are willing to admit any responsibility in the legislative fiasco being enacted at Washington.



**PAYING DOWN PROFITS** on open trades will properly be left to the judgment, inclination or ability of each brokerage firm under an amendment to the rules of the Board of Trade of Chicago, which for the second time has been approved for ballot by the directors. This change is very much desired by out of town correspondents of Board of Trade firms and should have the approval of the membership at large, especially since it is possible the change will lead to a corresponding improvement in the system of clearing trades whereby the brokers themselves will have less capital unnecessarily tied up.

**FORGING** bills of lading is such an easy matter and the possible returns from such forgeries so large, the wonder is more wheat shippers are not tempted to prey upon their brethren through the means of forged bills. In giving out blank S/O Bs/L without reservation the railroads voluntarily rush to the aid of the would-be forger. If they would place as many restrictions around their S/O Bs/L as they do around their passenger tickets to the next station, fewer bills would be forged. Passenger tickets bear the autographed signature of the General Passenger Agent, are numbered consecutively and bear the dating stamp of the station where sold. The same protection given to S/O Bs/L would place an effective check on such forgery.

**WHILE ALL** the states may not have the authority to require railroad companies to rent sites for buildings on their rights of way, they surely have the power to forbid railroads to force country elevator operators to sign onerous leases under duress or to pay extortionate charges for track frontage or track repairs. The building of bulk handling grain depots on railroad right of way greatly facilitates prompt transportation and to that extent works an accommodation to all patrons of the railroad company. If all grain were to be handled through the local package depots of the railroad, all freight would be inordinately delayed at all seasons. The rentals which many of the carriers are attempting to exact from grain elevator operators are so unreasonable as to be prohibitive. The trade cannot continue to thrive under such extravagant charges.

**THE SELLER** of grain, and that means practically every grain dealer, owes it to his business and to himself to check the buyer's confirmation against his own the instant it is received, in order that immediate objection may be made if there is any lack of agreement. Of course the same duty devolves upon the buyer. It is only by the observation of this fundamental principle which is universally recognized as fair that disagreements attendant upon a misunderstanding of the terms of a trade can be avoided. The original articles of trade actually constitute the contract, but frequently the only means of proving a point is found in the confirmations exchanged after the original articles have passed between the parties. If, then, the confirmations are not in accord, how can an arbitration committee or the courts be expected to know what was in the mind of the traders? Careful checking of confirmations means less litigation.

**THE ACTION** of the Board of Directors of the Omaha Grain Exchange in approving an amendment to the rules providing that privileges of membership shall be denied to any member who owes an unsatisfied balance to a country shipper cannot be too highly commended. It is necessary, of course, that members of an exchange shall be protected against unjust and unfair claims that might be made by disgruntled shippers, but this can easily be handled without harm to either party concerned. The presence of such a rule in the code of every exchange would go far toward removing the few remaining causes of friction between terminal market receivers and country shippers.

**THE EDUCATION** of the general public to the advantages, both to the producer and to the consumer, of having all grain marketed in well regulated public marketing places has long been recognized as essential to a clearer understanding of the functions of the grain exchanges. While this educational work is so large as to be discouraging for any one exchange to attempt, still if all were to join hands in enlightening the general public regarding their real functions performed in the economical marketing of grain, enough of the more intelligent citizens would come to a clearer understanding of the benefits of these public trading places to prevent their being handicapped by unreasonable regulations hereafter.

**DECISIONS** rendered by arbitration committees that fail to recognize definite principles become mere enforced compromises between the contending parties and have no good effect upon the trade. Rather do they serve to lessen the value of arbitration as a whole and to bring it into disrepute. Admittedly, the task of an arbitration committee is frequently a difficult one. Arbitration itself was conceived because it was almost impossible for judges and juries in civil courts to understand the technicalities involved in trade controversies. If, now, arbitration committees are to become mere agencies for forcing disputants to "split the difference" it will not come as a surprise to know that in the mind of the average business man arbitration has lost its position as a worthy method of adjusting disagreements.

**FINANCING** country elevator men has proved so disastrous to many terminal market receivers in the Northwest recently that this iniquitous practice has become quite unpopular. Lending money without security to country elevator operators may help to get consignments from shippers who are trying to do business on a shoe string, but such loans cannot have much influence with firms whose business is really worth while. The man who is in the grain shipping business for his own account prefers to consult his own interests in routing his shipments and will not enter into any agreement which is likely to deprive him of this privilege. Country shippers would be far better off were they to depend upon their local bankers for any needed financial assistance. Then they would be free to route every car of their grain to the market which promises the best returns.

**THE CONTENTION** of certain interests that grain cannot be shipped in bulk when it must pass thru and stay for a considerable time in tropical waters seems to have been disproved by the fact that it has been done. And the experiments, if such they may be called, appear to have shown that bulk cargoes in unlined ships will deteriorate even less than bagged cargoes in lined ships. What is the next argument in favor of bag handling?

**STEENERSON'S** bill HR9668 to change the rules governing the grading of spring wheat which was noticed extensively on page 839 of the Journal for Dec. 25, 1921, is said to have the endorsement and support of the auto-crats of the Agricultural bloc. Agitators may convince some wheat growers they can legislate value into wheat screenings, but all are doomed to distressing disappointment for, if the requirements of spring wheat grades are reduced so as to admit much more grain to the upper grades then the average market price of all grain in those grades will be depressed. The friends of this latest attempt to change the grades may honestly believe the change would help the producers, but they are sadly mistaken. Buyers of spring wheat know quality and can not be buncoed into paying No. 2 prices for No. 3 and No. 4 simply by changing the grading rules.

**A CHANGE** in the method of fixing freight and passenger rates is contemplated by a bill now before congress, whereby the carriers would be required to obtain the approval of the Interstate Commerce Commission on proposed increases but would be free to make reductions without that official sanction. In theory this may seem a desirable change, but it is probable that it would result in a hopeless muddle when placed in practice. If it is desirable that rate making be supervised by a government agency the subject should be considered as a whole and not subdivided in the manner suggested. Moreover, carriers might never be willing to make reductions, and the removal of this phase of rate making from the jurisdiction of the Commission would leave shippers without any recourse except to the courts. The situation is enough mixed as it is. If it cannot be cleared, let nothing be done to make it worse.

**THE CONFERENCE** held in Oklahoma City on Mar. 1 to consider the interpretation of heat damage as a factor in determining the grade of wheat was an interesting meeting. In conjunction with the school for the study of heat damage conducted on the following day by inspection officials, and attended by inspectors from practically all Southwestern markets, the conference undoubtedly resulted in great good and should have much to do with bringing about a better condition than has existed in that section in recent months. The action of the conference in endorsing the grain standards was an interesting development; and it gives rise to the thought that perhaps the standards and their interpretation are not so much responsible for the dissatisfaction as the so called government scale of discounts. That is another reason why that scale should be relegated to the scrap heap with other war impedimenta.



THE BUREAU OF MARKETS has given so much attention to commerce that someone with a clear vision at Washington has introduced a bill proposing the transfer of this bureau to the Department of Commerce. It might be that struggling merchants and manufacturers could secure some consideration from the politicians in charge of the bureau if its field of activities was broadened. The department has been much interested in the business of grain dealers and favored them with long-drawn out questionnaires, but up to the present writing has not given one helpful suggestion to any merchant in any line that we have knowledge of.

LIGHTNING caused the mutual fire insurance companies so many heavy losses last year that the Underwriters committee appointed to study the results and point out the way to reduced fire losses and reduced insurance costs has made as its first demand the reduction of the lightning hazard in country elevators. Not only are the insurance companies anxious to correct this hazard, but they are willing to give sufficient credit for the installation of standard lightning rod equipment to pay a higher rate of interest on the money invested; in fact it would not take many years for the policy-holder to get all his money back and again to realize a profit from the installation, and in addition to this profitable transaction he would be protected in the meantime against lightning. Careful investigation has failed to disclose the striking of any elevator by lightning which was protected by standard lightning rod equipment. The education of property owners to the real advantage of this protection may be somewhat difficult, but the losses from this cause are so great that the insurance companies cannot afford to leave any stone unturned to convince the unprotected policy-holder that his property can be profitably protected against this hazard.

WHEAT TESTING buckets cannot be expected to keep in prime working condition forever, and in view of the fact that the test weight of grain is now a more important factor in the grading of grain than ever before, it is clearly incumbent upon country elevator operators to use a testing bucket of at least one quart capacity and have it tested occasionally to insure accuracy. Recognizing this opportunity for inaccuracy, the sec'y of the Nebraska State Board of Agriculture has suggested the testing of all tester buckets prior to the movement of the new crop. Such precaution is likely to prove more advantageous to the grain buyer than to the grain seller, because buckets seem to have a weakness for weighing samples in excess of their true test weight. The practice of dropping the beam and poise into the bucket after use is so common that the bottoms of many buckets have been depressed sufficiently to give the bucket a greater capacity than originally intended, with the result that the buyer pays on the basis of a test weight he does not get. The wear of the beam and the bucket due to abrasion is also responsible for other inaccuracies. So much dependence is now placed on the tester bucket that it is clearly incumbent upon all users to have the tester sealed at least once a year to insure accuracy.

FIGHTING COMPETITORS, that is, over-bidding grain buyers, persist in driving all hope of profit from their own business as well as from the business of their competitors. It always has been so and doubtless will continue so until the grain buyers of the land attain better business balance.

## How Do You Transmit Power?

No alert grain dealer would build a new, or overhaul an old grain handling plant with the intention of installing obsolete power transmitting machinery, unless he expected soon to unload the junk on someone else. In spite of this fact many improvers have been induced to invest in out of date facilities, because they and the builder they employed were not progressive enough to investigate the better transmitting facilities afforded by the machinery market.

This has been the history of the past, and no doubt others will commit the same error in the future, unless they devote more study to their own power problems, and discuss the points involved with power transmission engineers. Every prospective improver will tell you that no real economy is to be effected through the installation of out of date machinery, and every elevator man who expects to provide a smooth working plant for handling his business, will insist upon having the latest mechanical equipment obtainable. True, many plants are still operated with long lines of shafting and hundreds of belts, but experience has proved conclusively that power can be transmitted with less waste and greater efficiency through the employment of other means.

The story of the elevator man who installed modern transmitting machinery to go with a new power plant disclosed that he was greatly elated to find after the transmitting machinery was installed and the power plant delayed in shipment, that he did not need additional power. The non-arrival of the new power plant proved that his old transmitting machinery had been wasting more power than it was delivering.

The cost of installation of modern equipment may be somewhat greater than a new equipment of old time facilities, yet the expense of care and up-keep of the modern transmitting facilities is so much less than the old that the progressive elevator man does not hesitate to reduce his cost of operation through the installation of the best facilities obtainable.

Convenience and economy of the modern transmitting equipment are not the only advantages. Every mechanical operator is anxious to secure the delivery of the largest percentage possible of the power of the prime mover, and he also has perpetual pride in the possession of a plant which can be depended upon to do its work at all times with a minimum of care. Watchful operators who are ever alert to reduce the friction of their machinery and the cost of insurance do not overlook the fire hazard of the friction producers, nor the hazard to workmen who are handicapped in the operation of the plant by a lot of out of date transmitting machinery.

The advantages of modern transmitting facilities told of in different carefully prepared articles in this number of so certain, so important, that no prospective improver or builder of grain handling plants can afford to proceed with his plans without carefully investigating the methods of the latest and best facilities for transmitting power.

## Changes in Wheat Grades Not Wanted.

Ever since the 1901 meeting of the Grain Dealers National Ass'n the members of the grain trade have persisted in demanding uniform grades for grain. It was only after the trade had made several attempts to secure uniformity in all of the principal grain markets of the land that supervision of the grading by the federal government was even considered by the members of the trade. But finally, in the hope of having not only the rule-making authority, but the supervision of the actual grading in the hands of the Federal Government, the members of the grain trade were willing that it should perform this service for the grain trade of the land.

The changes proposed by the committee appointed by the Secretary of Agriculture in the rules governing the grading of spring wheat, which are published elsewhere in this number, were drafted, no doubt, to satisfy an active though unimportant political faction of the spring wheat section. The grain trade was not consulted or considered.

Complaints have also been filed against the grading of wheat in other sections of the country, but there has not been a persistent demand for changes in the rules. It is not certain in the minds of many men of wide experience in the grain trade that the present wheat grades have been given the real test to which they are entitled before serious consideration is given to changes in the rules.

If after all inspection departments have attained such a high degree of efficiency that true uniformity of grading is attained and then the results are unsatisfactory, it might be time to consider changes. Any one familiar with the grading of grain will readily recognize the absolute necessity of attaining uniform methods and practices in inspection as well as uniform rules before we can even hope to attain uniform results. Every change, even though it be a small one, is quite certain to cause many disappointments and heavy losses.

Until our wheat grades become stabilized, grain buyers generally will be forced to take every precaution against discrepancies in the grading lest unexpected losses be forced upon them. Every change in the rules as well as in the methods and practices of the grain inspection department will make for inefficiency; and the buyers generally, in order to play safe, must of necessity work on a much wider margin until they and the inspectors have a more thorough knowledge of the resulting characteristics of the amended grades.

Judging from the announcement sent out by the Secretary of Agriculture, the proposed changes, given elsewhere in this number, have already received his approval, so the rules will be amended effective with the new crop unless the wheat growers, who have the most at stake, and the grain dealers arise and protest vigorously against this unnecessary meddling with the rules governing the grading of wheat.

While the changes proposed may furnish an unlimited supply of gas for the political balloon of certain Northwestern leaders, they will not help the wheat growers. In the opinion of some experienced dealers the change will do much to depress the value of the best portion of spring wheat marketed.

Those who have clear-cut convictions in the matter owe it to themselves and the producers to communicate promptly with the Secretary of Agriculture.



## Asked— Answered

[Readers who fail to find information desired on any subject of interest to grain dealers should send us their query for free publication here. The experience of your brother dealers is worth consulting. Replies to queries are solicited.]

### Information on Wireless Telephone?

*Grain Dealers Journal:* We would like to know where we can get information on these radio-telephone outfits, and would we have to be an expert in operating one of these? What would an outfit cost? How big an outfit would be best to install? I would surely like to install something like this.—Fred Zobisch of Zobisch Grain Co., Hinton, Okla.

**Ans.:** Information on the radiophone is published elsewhere in this number of the Journal, and also see pages 846 and 847 of the Journal for Dec. 25.

### Charge for Transfer?

*Grain Dealers Journal:* What is the cost of transfer of carloads from one road to the other? How is the charge collected?

Are the charges added to the freight in the freight rate?—Servia Elevator Co., Servia, Ind.

**Ans.:** When a car is moved from one road to another charges are made only where tariffs are in effect providing for such switching charges.

When the contents of a car are transferred from a car of one road to a car of another line the charge is usually one cent per bushel. Oats are transferred at  $\frac{1}{2}$  cent and wheat at  $\frac{1}{4}$  cents per bushel.

When a car is transferred in transit because too heavily loaded the charge is one cent per bushel, plus any switching charges that may be necessary in accomplishing the transfer.

These charges appear on the freight expense bill as advanced charges and are collected with the freight. Switching charges may run from \$1.50 up to several dollars per car, as provided by tariff.

### How to Code a Message?

*Grain Dealers Journal:* I have not been able to find in the Universal Grain Code words that apply to the messages I use. The following is a sample of one of my telegrams: "Quote me price on No. 2 yellow corn sacked f.o.b. Thermopolis."

Will you tell me how to write this and where to find the words?—R. A. Kelly, Thermopolis, Wyo.

**Ans.:** The message given can be expressed in the following words: "Gramercy enmesh sacked." These words mean: "Quote price laid down here No. 2 yellow corn sacked."

However, this message is not desirable because it fails to state the inquiry with sufficient clearness. If the answer were not more explicit the resulting transaction might lead to arbitration or litigation that would be expensive for both parties. A better method of stating the inquiry would be as follows:

"Wire offer basis on track here one 60,000-lb. capacity car No. 2 yellow corn sacked this week shipment."

Using the Universal Grain Code, this message would be coded:

"Impassion converted cowering enmesh sacked fabulosity."

A typical answer to such a message would be as follows:

"Offer slashed converted cowering enmesh sacked fabulosity amorously inadequate sawfish."

When decoded, the answer means:

"Offer subject to immediate reply by wire one car 60,000 pounds No. 2 yellow corn sacked this week shipment 89½ on track here Omaha official weights and grades."

There would be nothing left to conjecture, and practically every opportunity for misunderstanding would be removed. Arbitrators are agreed that most controversies originate in failure of one party or the other to state his thoughts clearly at the time the transaction is made, and more care in making trades would eliminate much of the litigation of the present.

Code words in the Universal Grain Code are arranged alphabetically and separate sections are devoted to terms and phrases on the various subjects grain dealers and millers find it desirable to use in their telegrams.

### Refund for Wheat Losses?

*Grain Dealers Journal:* A number of the grain dealers in this section prior to Aug. 15, 1917 had bought wheat and by reason of the order of that date fixing the price of wheat they lost heavily.

Have the grain dealers of the country taken any action to obtain reimbursement for these losses? What is your opinion as to whether these dealers would have a remedy in the Court of Claims for these losses?—J. L. Reynolds, Nashville, Tenn.

**Ans.:** Dealers who suffered loss by the downward fixing of wheat prices by the government in 1917 have taken some steps in an effort to obtain reimbursement. Ben E. Clement, Waco, Tex., now pres. of the Grain Dealers National Ass'n, was chairman of a Wheat Loss Claims Com'te. Dick O'Bannon, Sherman, Tex., was another member, and D. L. Boyer, Mexico, Mo., sec'y of the Missouri Grain Dealers Ass'n, was sec'y. The exact status of the com'te's work can be learned at any time by addressing Mr. Boyer.

A bill to authorize reimbursement for these losses was introduced in Congress but it has never been passed. As the matter now stands, it is purely a matter of opinion whether a dealer who sustained a loss would receive an award in the Court of Claims, but that tribunal is available for just such purposes. In a case where the amount is considerable, and where the facts are clear and can be effectually substantiated, it might be worth while to try.

### Elevator Charges?

*Grain Dealers Journal:* We are trying to arrive at the costs of operation to see how our costs compare with others. We are elevating for one cent and  $\frac{3}{4}$  cents on oats, which is pre-war cost when common labor was to be had here at 25 and 30 cents per hour. This item alone in the cost of operation has doubled. What are the elevator charges at other markets?—W. A. Boardman, mgr. East Side Iron Elevator Co., Toledo, O.

**Ans.:** At Chicago the regular tariff of a railroad transfer elevator provides the following charges: Transfer, natural oats,  $\frac{3}{4}$ c per bu.; mill oats,  $1\frac{1}{4}$ c; corn, kafir corn, milo and barley, 1c; wheat, rye,  $1\frac{1}{4}$ c; 32-lb. screenings,  $1\frac{1}{2}$ c; 28-lb. screenings,  $2\frac{3}{4}$ c; 26-lb. screenings, 2c; below 26 lbs. special rate; screenings, 4c per 100 lbs.; dry salvage grain,  $1\frac{1}{2}$  to 4c per bu.; unloading bulkhead cars, 1 to 2c per bu.; blowing wheat or rye,  $\frac{1}{2}$ c per bu.; blowing other grain,  $\frac{1}{4}$ c per bu.; mixing and blowing wheat or rye,  $\frac{1}{2}$ c per bu.; mixing and blowing other grains,  $\frac{1}{4}$ c per bu.; cooling through drier without heat,  $\frac{1}{2}$ c per bu.; clipping, bleaching and blowing oats,  $\frac{1}{4}$ c per bu.; bleaching, blowing and mixing barley,  $\frac{1}{4}$ c per bu. On grain received for transfer, drying, mixing, blowing, cooling, clipping, bleaching or cleaning, 10 days' free storage will be allowed.

At Council Bluffs, Ia., the charge at the Northwestern Elevator is, for unloading, elevating and reloading grain, 1c per bu.; clipping, scouring or smutting,  $\frac{1}{2}$ c; cleaning,  $\frac{1}{2}$ c; mixing,  $\frac{1}{4}$ c; running,  $\frac{1}{4}$ c; storage, including insurance,  $1/30$ c per day.

At New Orleans the public elevator tariff provides the following charges: Elevation, for delivery to vessels or to cars,  $1\frac{1}{4}$ c per bu. for all grain; into sacking hoppers,  $1\frac{1}{4}$ c; cleaning, cooling, blowing, screening, clipping, mixing, turning,  $\frac{1}{4}$ c; smutting, 1c; drying, No. 1, 2, 3, 4 and 5 grades,  $1\frac{1}{2}$ c; No. 6, 2c; sample grain, 2c per bu. for 5% or less extraction and  $\frac{1}{2}$ c additional for each additional 1% of moisture extraction; storage for local or domestic, first 5 days free, next 10 day period, 1c per 100 lbs.; for each succeeding 10-day period,  $\frac{3}{4}$ c per 100 lbs.

At Sioux City, Ia., the Terminal Elevator Corporation charges the same as at Council Bluffs except that insurance is extra,  $\frac{1}{4}$ c per bu. for each 30 days.

### Death of W. S. Powell.

William Smith Powell, who has been chief grain inspector of the Cairo Board of Trade since 1909, died recently at that city of cancer of the throat, a malady from which he has suffered for the last 8 months.

Mr. Powell, who was 56 years of age, was born in Chicago, and for 29 years prior to going to Cairo he was with the Chicago office of the Illinois State Grain Inspection Dep't.

He was active in the efforts which were made by the trade some years ago to obtain uniform grades, and took part in many of the hearings held after the enactment of the

Grain Standards Act to obtain ideas that were later incorporated into the grade standards. Mr. Powell was one who did not look with special favor on federal control of inspection, but he was a firm believer in uniform grades and did much to bring them into being.

A regular attendant at meetings and conventions of the grain trade and the chief inspectors, he did not absent himself from the last general gathering of the kind, even tho he was at the time suffering from the disease that was shortly to cause his death.

### Mixing Grain in Public Warehouses Under Proposed Illinois Constitution.

Attorney Henry S. Robbins has given the Chicago Board of Trade an opinion on the proposed warehouse clause in the new Constitution of Illinois, from which opinion the following is taken.

The draft of the proposed amendment is identical with the present constitution except that it inserts in sec. 6 the words, "consumers and others interested" and eliminates the word "and" between the words producers and shippers immediately preceding.

In the case of Central Elevator Co. v. Attorney General, 174 Ill. 203, the Supreme Court held that Class A warehousemen could not store their own grain in their public elevators and there mix it with the grain of their depositors.

The amendment to the Act in 1897 permitting warehousemen to mix their grain with the grain of others was declared unconstitutional by the Supreme Court subsequently.

If this warehouse clause of the proposed new constitution is inserted as now drawn it will be resorted to to open up again the question decided in *Hannah v. People*, that the Legislature may not authorize Class A warehouses to store their own grain in their public warehouses and mix it with the grain of others. If it is the purpose to reopen this question the proposed new article does not seem open to any serious objection; but if it is the purpose of the Convention not to permit the Legislature to impair the law as declared in *Hannah v. People* it should strike out the new words inserted "consumers and others interested" and re-enact the present Article verbatim, as indeed it does with the exception of the insertion of these four words.

If it is the purpose to have no change in the present law the prudent thing to do would be to leave the constitutional provision as it is.

The "agricultural" bloc is composed of: 14 lawyers, 1 farmer, 2 live-stock industry, 1 insurance, 1 writer, 1 agricultural college president, 1 well driller, 1 editor.



W. S. Powell, Cairo, Ill., Deceased.



## Letters

[Here is the grain dealers' forum for the discussion of grain trade problems, practices and needed reforms. When you have anything to say of interest to members of the grain trade, send it to the Journal for publication. It may draw out the views of others.]

### Law Should Govern Right of Way Rentals.

*Grain Dealers Journal:* I have a grain house on a side track occupying 70x50 ft. of ground for which I first paid \$15, that was refunded to me. Under the Big Four it was cut out.

I then paid \$15 yearly rental, but for the last two years have been raised to \$25 per year, altho you can buy lots in the town for that amount.

For the accommodation of shippers I use the grain house for many things when they can not get cars, such as storing apples. I think there ought to be a law to govern this rent question according to the locality, as the charge should be governed by the valuation or taxes. My rental will buy a half acre of land anywhere around the town.—D. M. Cover, Tunnel Hill, Ill.

### Bulk Shipments from Australia to England Without Lining Holds.

*Editor Grain Dealers Journal:* In your issue of October 25th, 1921, I notice that the question of lining with lumber the grain carrying steamers loading at Pacific ports for Europe has caused considerable controversy. When the question of bulk handling methods was under consideration in this country, it was stated by many alleged experts that it would be necessary to line all the vessels carrying bulk grain, as otherwise the grain would become damaged by the sweating of the metal sides of the ships, and that the expense of this lining in a country where lumber is scarce and dear would be a great disadvantage to the bulk handling system. Experienced captains pointed out that sweating occurred in vessels carrying sacks, owing to the air spaces which are left between the sacks, and that consequently it was always necessary to place wooden battens alongside a ship's side to keep the sacks from coming into contact with the metal; but in loading bulk grain, air is excluded from the hold carrying the grain, and sweating does not occur.

The Sydney Terminal Elevator commenced loading out bulk grain last year, and during the season we loaded into steamers some 55,000 tons of wheat, mostly for Great Britain, and all in steamers with *unlined* holds. We had special reports made of the first three cargoes at their ports of discharge, and the following information may be of use to the authorities at Portland (Ore.)

S.S. "*Astyanax*"—Quantity loaded 4,503 tons. Date loaded, 29th March, 1921. Discharged Newcastle-on-Tyne, England, June 15th, 1921. Damage to grain—nil. It was stated that the cargo was better than most bagged cargoes arriving in England.

S.S. "*Paris City*"—Quantity loaded 8018 tons. Date loaded 5th May, 1921. Discharged at Cardiff, Wales, 2nd August, 1921. Wheat reported on discharge to be in good order and condition, without any indications of sweating.

S.S. "*Sloterdijk*"—Quantity loaded 5,581 tons. Date loaded 9th July, 1921. Discharged in Dublin and Liverpool October 1921. Grain was reported to be uniform fair average quality, and in good condition.

The voyage from Australia to Great Britain is longer than that from the Pacific Coast via the Panama Canal, and the above reports, which are official, show conclusively that long voyages can be made in tropical waters, with-

out lining the holds, and that grain can be delivered under these circumstances in perfect condition.—Yours faithfully, E. Harris, Officer-in-Charge (Actg.) Government Grain Elevators, Sydney, N. S. W.

### Carrier Estopped from Denying Receipt of Less Grain Than Shown by B/L & Freight Bill.

*Grain Dealers Journal:* The Circuit Court at Nashville, Tenn., delivered an opinion on the first day of March that will be of interest to the grain dealers.

The Louisville & Nashville Railroad Co., through its attorney, A. W. Stockell, brought suit against the Nashville Grain & Feed Co. for \$127.50, alleged undercharge on a shipment of oats from Louisville, Ky.

The defendant through its attorney J. L. Reynolds, filed a plea of set off and counterclaim amounting to \$173.00. This counterclaim was made up of several clear record claims for loss of grain in transit, including the shipment in question.

The Railroad insisted that the counterclaim being for loss in shipments other than the one in controversy and being claims for "unliquidated" damages could not be the subject of set off against the freight charges.

The Court overruled this objection and followed the recent Tennessee case of N. C. & St. L. Ry. vs. Milling Co., decided at the last term of the Supreme Court of the State, holding that these losses could be set off against freight charges.

The defendant introduced the paid freight bills and bills of lading, all being "order notify" shipments. These showed the amount of grain delivered to the carrier and the payment of freight on that amount. It then introduced the Weigh Master of the Nashville Grain Exchange, showing a delivery to the consignee in each instance of 750 to 1000 pounds of grain less than the amount shown in the bills of lading and freight bills.

The railroad contended that the burden was on the defendant to prove by the shipper the amount of grain delivered to the Carrier.

The defendant insisted that the bills of lading and freight bills were prima facie evidence of the amount delivered and the burden shifted to the Carrier to show that it received a less amount or that it delivered all that it received. It further insisted that having collected freight on the amount shown in the bill of lading, the carrier was estopped to deny that it received a less amount.

The Court adopted the view of the defendant and gave judgment for the full amount of the counterclaim. The case will be watched with interest in the Appellate Courts.—Nashville Grain & Feed Co., Nashville, Tenn.

FUNDAMENTAL CONDITIONS are very bullish, but it takes time for them to manifest themselves and in the normal course of events present prices should not have been reached until much later in the season when it could be determined whether or not the statistics upon which the trade are now basing their calculations are valid. The most intelligent students are greatly puzzled by the statistic kaleidoscope, and so far as real knowledge is concerned, it would appear that we have again returned to the dark ages of inaccuracy and purest guesswork in grain statistics.—Ichtetz & Watson.

### Grain Growers Sales Company Incorporated.

The U. S. Grain Growers, Inc., has announced the incorporation of the U. S. Grain Growers Sales Co., a subsidiary organization which will plan to operate at once in Chicago, Kansas City, Omaha, Indianapolis and Minneapolis.

This subsidiary has been organized to serve as the agency for selling grain held under contract by the U. S. G. G. If any grain is handled the promoters must conduct a continuous campaign for new members.

### Coming Conventions.

April 11, 12. Western Grain Dealers Ass'n at Des Moines, Ia.

April 19, 20. Missouri Grain Dealers Ass'n at St. Louis, Mo.

May 9, 10. Illinois Grain Dealers' Ass'n at Peoria.

May 11, 12. Oklahoma Grain Dealers Ass'n at Oklahoma City.

May 16, 17, 18. Kansas Grain Dealers Ass'n at Wichita.

May 29, 31. Southern Seedmens Ass'n at New Orleans, La.

June 21, 22, 23. American Seed Trade Ass'n at Chicago.

July 25, 27. National Hay Ass'n at Cedar Point, O.

HEADQUARTERS of the Pacific Northwest Grain Dealers Ass'n has been moved from Portland, Ore., to Spokane, Wash.

A BILL now being considered in the New York State Assembly is designed to drive out of business bucket shop operators and swindling stock manipulators.

MEMBERS of the Millers National Federation have voted almost unanimously in favor of holding the 1922 mass convention at Kansas City. The dates will be announced in the near future.

HORSES and mules on farms in the United States Jan. 1 totaled 24,535,000 compared with 24,633,000 on Jan. 1, 1921 and 25,193,000 on Jan. 1, 1920, it is estimated by the Crop Reporting Board of the Bureau of Markets and Crop Estimates. This does not include the horses and mules in cities and villages, these not being estimated yearly, but in 1920 the census showed 2,083,861.

THE ATTEMPT of the Roumanian government to control the exportation of grain, and to fix prices for it, has failed because of the opposition of farmers to the scheme. A syndicate, the "Syndex," was given exclusive control of all grain exports in Aug. 1921 and it was decreed that 50% of the grain produced in the country should be exported by it. More recently this program has been changed, and partial exemption from export, internal and other taxes has been granted to those employing mechanical equipment in producing grain between Sept. 1, 1921 and Apr. 21, 1922.

## Leaking in Transit

Grain dealers can help brother sufferers in the collection of claims for loss by reporting to Grain Dealers Journal, for free publication, car initials, number, place, date and condition of car seen leaking grain in transit.

Recently we have received reports of the following leaking or bad order cars:

M. P. 34937 passed thru Taylorville, Ill., on the Wabash Feb. 25 with south door open. Car was loaded with corn.—L. T. Jones & Co., by L. T. Jones.

U. P. 124793 passed thru Brighton, Colo., Mar. 1, southbound, leaking corn thru a hole in the side of the car. Hole had been patched with a piece of tin. Train did not stop so could not fix or examine carefully.—The Brighton Farmers Co-op. Elvtr. Co.

T. P. & W. 8291 passed thru La Place, Ill., Feb. 15, east bound on C. I. & W., leaking yellow corn in a stream.—V. Hawthorne.

D. & S. L. 52102 passed thru Nickel, Ind., Feb. 8, leaking corn at door. Train moving rapidly so had no opportunity to repair.—Nickel Grain Co., Nickel (Valparaiso p. o.), Ind.

M. P. 40553 passed thru Shannon, Kan., Jan. 24 in eastbound train leaking wheat badly from one (front) corner.—J. E. Duncan & Son, per J. M. Duncan.

I. C. 35467 leaking white corn, passed thru Raub, Ind., on Big 4 on morning of Jan. 6.—Harry E. Garrison.



# Proposed Changes for Federal Wheat Grades

In the spring of 1921 I received a number of requests for changes in the Federal wheat grades, and in April held a two days' hearing, attended by various people interested in such grades. The evidence submitted did not convince me that the changes proposed were justified. At the conclusion of the hearing I made the following statement:

"The criticism of the present grades warrants a thorough-going investigation, especially as to their practical application at country buying points. I shall make such investigation during the coming wheat-marketing season, and if changes are justified they will be made well in advance of the marketing season next year."

Last summer I secured the services of Mr. L. A. Fitz of the University of Kansas, and Mr. John Lee Coulter of the West Virginia Experiment Station, and asked them to go into the wheat country and make thorough inquiry in the country and at the elevators and mills. I asked Mr. Fitz to serve because of his practical and technical knowledge of the grading and milling of wheat, and Professor Coulter because of his practical experience and his training as an economist. Both are men of very high standing in agricultural work, and undertook the investigation wholly free from prejudice and with no other desire than to gather and present the information necessary to arrive at a just decision.

They had a free hand in making their studies and investigations through the summer and fall of 1921. They were furnished with experienced assistants and all of the data previously collected in this Department were made available to them. They spent some months in the wheat country. They have made several reports to me and some recommendations which, if adopted, would involve changes in the present wheat grades. These recommendations which contemplate changes are believed to be correctly summarized and stated here. Their reports are extensive and therefore the detailed explanatory matter and the discussions are omitted. In brief, their suggestions are as follows:

## TEST WEIGHT PER BUSHEL.

Let the test weight per bushel be determined upon the basis of the clean wheat, excluding both foreign material other than dockage and dockage. Four views as to grade requirements based on test weight per bushel are presented for consideration:

- a. Let the present minimum test weight of 58 lbs. for hard red spring stand for No. 1, but change No. 2 to 56 lbs., No. 3 to 54 lbs., and No. 4 to 52 lbs., leaving No. 5 the same as at present.
- b. Restore the former test weight per bushel requirement of 59 lbs. for No. 1, leaving the other grades the same as at present.
- c. Provide a new grade at the top with a minimum of 60 lbs.
- d. No change in present test weights.

## MOISTURE CONTENT:

Let the limit of 14 per cent for No. 1 hard red spring and durum wheat stand, but make the same limit apply to all the other grades in these classes. In case any wheat has moisture content in excess of 14 per cent, grade it in the same manner as if it did not have such excess moisture but attach to the grade designation the words "excess moisture" or some similar phrase, together with the percentage of moisture. Apply the same principle to all other classes of wheat, using the present limit for No. 1 in each class as the basis.

## FOREIGN MATERIAL OTHER THAN DOCKAGE:

Let the grades be based strictly upon the clean wheat and, therefore, let all foreign material, including dockage, be treated separately. This would mean, for example, that the test weight per bushel would be on the basis of the clean wheat, excluding all foreign material. Limit No. 1 and all other grades to 0.5% of foreign material other than dockage and when the amount of such foreign material other than dockage exceeds 0.5% in any grade, its percentage shall be determined and stated separately in addition to the grade designation, together with a statement of the character of

such foreign material, such as wild peas, king-head, rye, flax, etc.

## SUBCLASSES OF HARD RED SPRING WHEAT:

Three suggestions are considered and presented:

- a. Drop the red spring subclass.
- b. Retain red spring and raise the requirements of northern spring wheat with respect to dark, hard and vitreous kernels, but no specific percentage recommended.
- c. Let the present subclassification stand.

## MIXED WHEAT:

Consideration is given to the question of the desirability of some change in the provisions for mixed wheat, with special reference to mixture of hard red spring and durum wheat but without specific recommendation.

While these investigations were being conducted and reports prepared independent consideration has been given in the Pacific Northwest to the possibility of some change in the standards for white wheats now covered in the common white and white club classes. Among the suggestions advanced are the following:

## WHITE WHEATS:

- a. Combine the present classes, common white and white club, into one class designated "white wheat."
- b. Subdivide the new class into three subclasses, designated hard white, soft white, and white walls.
- c. Make the same application of the hard white and soft white subclasses as at present and designate as white walls all white wheats or mixtures of white wheats containing more than ten per cent of white club or sonora.

As ninety days' notice of proposed changes is required, and as it is desirable to have any proposed changes go into effect at the beginning of the marketing of the bulk of the wheat crop of 1922, final decision as to changes must be reached early in April. I shall not hold further hearings, but invite careful consideration to the proposals included herewith, and to let me have in writing, not later than March 23, a statement of their views, with the reasons for or against each item, avoiding generalities. Statements and opinions received later than March 23 cannot be considered.

This matter is one of considerable importance, and I hope to have free expression of opinions from those interested. All communications will be given full consideration. The announcement of conclusions will be made at the earliest possible date.—Henry C. Wallace, Secretary of Agriculture.

## Com'te on Prevention of Dust Explosions.

As the result of a conference of interested organizations, held at Chicago, Feb. 9, to consider ways and means to prevent grain dust explosions, a com'te to study the subject is in process of being organized. The conference designated Joseph G. Hubbell, of Chicago, representing the Underwriters Grain Ass'n, as temporary sec'y, and instructed him to ask the following organizations to name representatives to effect a permanent organization and to formulate a set of proposals satisfactory to the interests involved.

National Board of Fire Underwriters, Terminal Elevator Grain Merchants Ass'n, Mutual Fire Prevention Buro, National Fire Protection Ass'n, Underwriters Grain Ass'n, Railway Fire Protection Ass'n, and Weighmasters-Scalemens Conference. On Mar. 9 the first 6 organizations named had given favorable response to the proposal.

The government of the Dominion of Canada has organized and now has working, with government authority, a com'te which is working to the same end, and the Canadian body appears to anticipate the creation of a similar com'te in the United States in order that the problem may be attacked co-operatively.

The work of the com'te probably will have to do primarily with the control of dust in terminal elevators, altho it is not the intention to disregard country elevators and other grain handling plants.

## Ohio Farmers Grain Dealers Meet.

The annual convention of the Ohio Farmers Grain Dealers Ass'n was held Feb. 22 and 23 at Findlay. Delegates representing 61 elevator companies were present.

In his annual address, Pres. Croninger said that the farmers elevators are satisfactorily weathering the storm of financial depression and that better times are in store for agriculture generally. He asserted that the terminal market grain dealer is one of the best friends the farmers and farmers elevators have.

The meeting was addressed also by L. J. Taber, of the Ohio Board of Agriculture. Kenton D. Keilholtz, pres. of the Toledo Produce Exchange, was the principal speaker at the banquet.

Resolutions adopted endorsed the Great Lakes-St. Lawrence Waterway; demanded reduction in freight rates; and asked for strict enforcement of the laws limiting the weight of loads that may be carried on highways by trucks.

## Daily Closing Prices.

The daily closing prices of wheat, corn, oats, rye and barley for May delivery at the following markets for the past two weeks have been as follows:

MAY WHEAT.										
	Feb. 25.	Feb. 27.	Feb. 28.	Mar. 1.	Mar. 2.	Mar. 3.	Mar. 4.	Mar. 6.	Mar. 7.	Mar. 8.
Chicago	147½	147	147½	143½	146	145½	142	143½	141½	141½
Kansas City	133½	134½	132½	130½	133	131½	128½	131½	129½	129½
St. Louis	141½	141½	140½	137½	139½	138½	135½	138½	136½	137½
Minneapolis	147½	146½	146½	142½	146½	146½	143½	144½	143½	144½
Duluth (durum)	124	123½	124½	121	125½	126½	124½	126½	126	125½
Winnipeg	143½	144½	143½	139½	142½	142½	140½	142½	140½	140½
Toledo	154	155	155	152	153½	153	149	151	149	149½
Milwaukee	147	147½	147½	143½	146½	145½	142	143½	141½	142½
MAY CORN.										
Chicago	68½	67½	67½	66½	67½	66½	63½	64½	63½	64
Kansas City	62	61½	60½	59½	60½	59½	56½	58½	57½	57½
St. Louis	66½	65½	65½	63½	64½	64½	61½	62½	61½	61½
Milwaukee	68½	68	68	66	67½	66½	63½	64½	63½	64
MAY OATS.										
Chicago	43	42½	42½	41½	42½	41½	41	41½	41½	41½
Kansas City	40½	40½	39½	38½	39½	39	38½	38½	38½	38½
St. Louis	43	44	43	42½	42½	42½	41½	41½	41½	41½
Minneapolis	37½	37½	37½	36½	37	36½	35½	36	36	36
Winnipeg	50½	51½	51½	50½	51½	51½	50½	51½	50½	50½
Milwaukee	43	43	42½	41½	42½	41½	41	41½	41½	41½
MAY RYE.										
Chicago	109	109	108½	105½	106½	106½	105½	107½	107	108½
Minneapolis	99½	98½	99	94½	96½	97½	95½	97½	97	98½
Duluth	105½	105	104	100½	102½	104	102	104	102½	105½
Winnipeg	108½	109½	108	107½	107½	107½	105½	107	106½	107½
MAY BARLEY.										
Chicago	66½	67½	69	69	70	69	67½	67	67½	67½
Minneapolis	58½	59	60	60	60½	60½	59	58½	58½	58½
Winnipeg	68½	69½	69½	67½	67½	68	67½	67½	67½	66½



# Grain Movement

Reports on the movement of grain from farm to country elevator and movement from interior points are always welcome.

## ALABAMA.

Albany, Ala., Feb. 24.—Corn is moving freely.—Mathews Bros., Luke Mathews, Jr.

## IDAHO.

Soda Springs, Ida., Feb. 27.—Most all wheat out of farmers hands and shipped.—Idaho Grain Co.

## ILLINOIS.

Mansfield, Ill., Mar. 2.—Wheat looks fine.—L. M. Caldwell & Co.

Springfield, Ill., Mar. 8.—Snow that fell on the 1st protected and watered wheat. No snow cover now.—Clarence J. Root, meteorologist.

Springfield, Ill., Feb. 28.—Winter wheat in Illinois has been damaged somewhat in scattered areas by freezing and thawing. High winds have also blown the soil away from the roots of

the plant in a few localities. However, the crop as a whole is in good condition. Rye condition continues favorable generally.—A. J. Surratt, agricultural statistician.

Springfield, Ill., Feb. 28.—The old crop of wheat has been largely cleared off the farms. Farmers show a marked disposition to hold corn for higher prices.—A. J. Surratt, agricultural statistician.

## Rye Movement in February.

Receipts and shipments of rye at the various markets during February, compared with February, 1921, were as follows:

	Receipts		Shipments	
	1922.	1921.	1922.	1921.
Baltimore	536,176	1,702,030	909,443	1,448,581
Chicago	225,000	367,000	105,000	234,000
Cincinnati	1,200	15,600	3,600	20,100
Duluth	470,482	304,502	2,896	201,547
Ft. William	118,512	94,065	3,574	132,773
Galveston	.....	.....	60,000	366,185
Indianapolis	8,400	12,600	.....	12,600
Kansas City	23,100	30,800	28,000	28,600
Los Angeles, cars	.....	8	.....	.....
Milwaukee	303,160	150,120	173,630	145,410
Minneapolis	275,910	359,010	324,020	289,330
New York	268,800	.....	105,000	.....
Omaha	148,400	49,500	2,800	50,600
Philadelphia	97,333	107,836	88,000	51,476
St. Joseph	3,000	1,500	.....	3,000
St. Louis	40,700	29,700	8,820	18,160
Texas City	.....	.....	8,571	.....
Toledo	24,000	36,000	23,995	33,177

## Barley Movement in February.

Receipts and shipments of barley at the various markets during February, compared with February, 1921, were as follows:

	Receipts		Shipments	
	1922.	1921.	1922.	1921.
Baltimore	3,082	214,270	166,485	152,500
Chicago	905,000	483,000	167,000	465,000
Cincinnati	2,600	5,200	.....	.....
Duluth	1,631	1,946	2,271	38,073
Ft. William	417,794	602,091	379,895	154,178
Kansas City	114,000	117,000	66,300	75,400
Los Angeles, cars	139	115	.....	.....
Milwaukee	529,280	497,490	272,665	143,630
Minneapolis	583,730	739,410	739,160	787,270
New York	335,800	.....	143,000	.....
Omaha	96,000	61,200	75,200	70,200
Philadelphia	1,496	.....	.....	8,333
St. Joseph	10,500	36,750	.....	5,250
St. Louis	75,200	76,800	27,080	32,940
San Francisco,	.....	.....	.....	.....
tons	5,412	11,305	.....	.....
Toledo	1,200	2,400	.....	.....
Wichita	1,200	.....	1,200	.....

## Corn Movement in February.

Receipts and shipments of corn at the various markets during February, compared with February, 1921, were as follows:

	Receipts		Shipments	
	1922.	1921.	1922.	1921.
Baltimore	9,382,775	3,143,280	6,274,704	1,851,046
Chicago	31,109,000	13,657,000	19,329,000	5,166,000
Cincinnati	542,800	356,400	220,800	214,800
Duluth	1,566,834	267,431	58	10,772
Ft. William	7,668	4,473	6,206	5,601
Galveston	.....	.....	25,714	.....
Indianapolis	3,379,600	1,384,600	1,136,600	1,169,000
Kansas City	2,293,750	1,630,000	778,750	416,250
Los Angeles, cars	177	53	.....	.....
Milwaukee	3,406,920	1,471,020	1,398,898	1,541,725
Minneapolis	2,571,330	1,099,810	1,005,030	951,180
New York	4,408,800	.....	2,782,000	.....
Omaha	3,026,800	2,329,600	2,279,200	1,481,200
Philadelphia	2,419,427	1,601,225	1,881,030	903,439
St. Joseph	1,150,500	583,500	645,000	376,500
St. Louis	4,113,200	2,605,688	2,345,585	1,784,540
San Francisco,	.....	.....	.....	.....
tons	2,600	1,031	.....	.....
Texas City	.....	.....	480,000	.....
Toledo	649,250	156,250	308,800	127,902
Wichita	84,000	102,200	65,000	88,000

## Oats Movement in February.

Receipts and shipments of oats at the various markets during February, compared with February, 1921, were as follows:

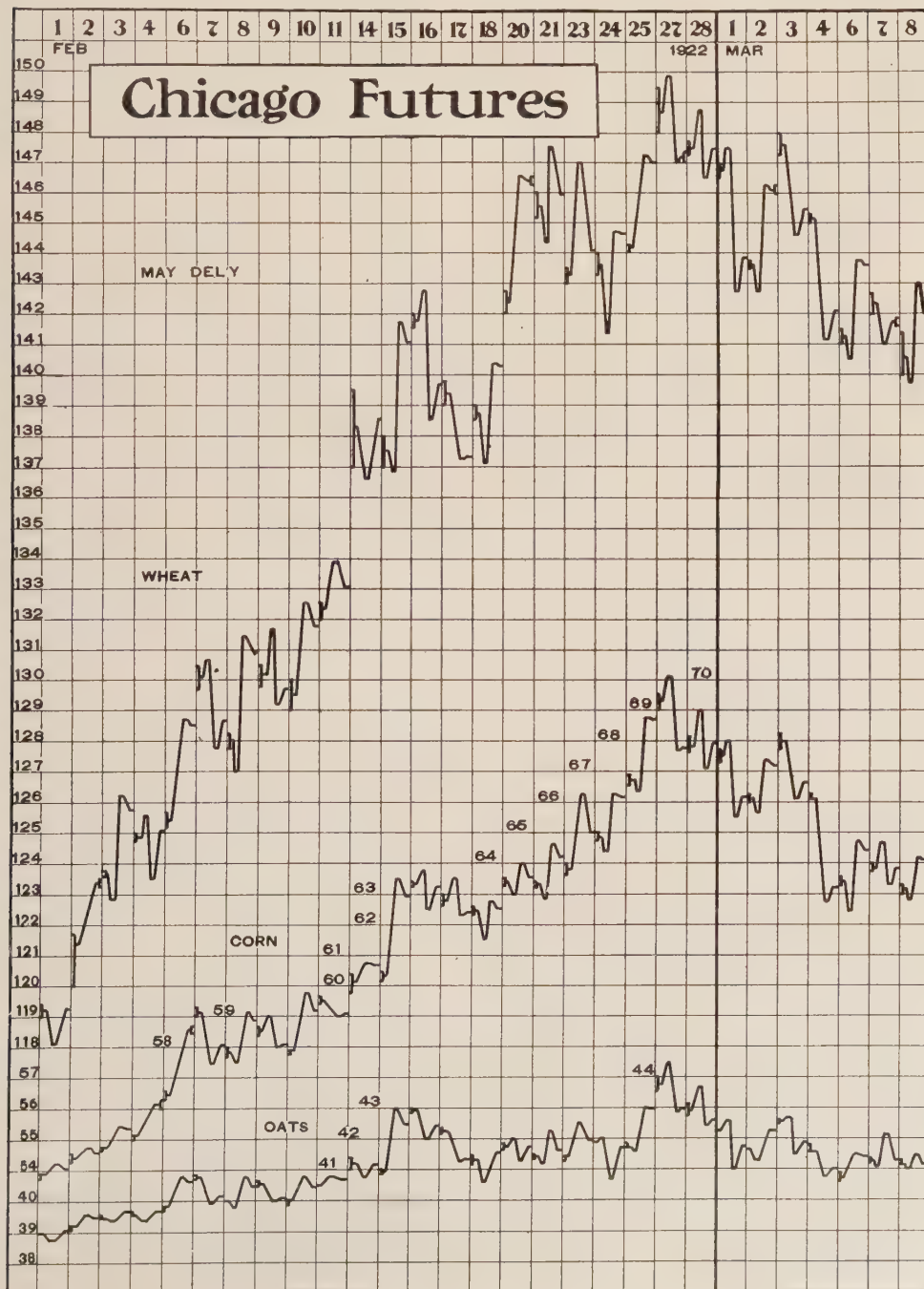
	Receipts		Shipments	
	1922.	1921.	1922.	1921.
Baltimore	102,223	129,004	11	48,862
Chicago	6,848,000	3,874,000	4,457,000	3,304,000
Cincinnati	250,000	278,000	214,000	313,000
Duluth	196,226	975,927	9,300	4,087
Ft. William	1,917,347	3,151,051	2,097,766	451,945
Indianapolis	1,032,000	684,000	674,000	796,000
Kansas City	763,300	428,400	346,500	504,000
Los Angeles, cars	20	20	.....	.....
Milwaukee	2,011,465	539,440	1,066,040	470,300
Minneapolis	2,081,400	1,252,090	1,817,330	1,110,920
New York	1,334,000	.....	640,000	.....
Omaha	798,000	420,000	792,000	610,000
Philadelphia	150,135	122,028	.....	.....
St. Joseph	82,000	108,000	34,000	72,000
St. Louis	2,584,000	1,932,600	1,722,070	1,930,680
San Francisco,	.....	.....	.....	.....
tons	889	286	.....	.....
Toledo	260,350	199,900	123,560	226,900
Wichita	22,000	15,000	20,000	15,000

## Wheat Movement in February.

Receipts and shipments of wheat at the various markets during February, compared with February, 1921, were as follows:

	Receipts		Shipments	
	1922.	1921.	1922.	1921.
Baltimore	814,531	739,799	1,565,204	1,030,551
Chicago	1,393,000	1,134,000	918,000	1,192,000
Cincinnati	236,400	109,200	207,600	117,600
Duluth	594,342	1,367,331	78,129	1,215,468
Ft. William	4,163,133	4,519,862	3,693,722	3,039,918
Galveston	.....	.....	1,052,333	5,107,724
Indianapolis	213,200	182,000	33,800	52,000
Kansas City	7,638,300	6,556,950	4,596,750	5,354,100
Los Angeles, cars	326	185	.....	.....
Milwaukee	112,000	248,400	125,725	142,075
Minneapolis	7,072,000	7,371,960	2,038,920	3,270,400
New York	3,750,600	.....	2,954,000	.....
Omaha	1,863,400	990,600	1,342,600	981,000
Philadelphia	3,163,906	838,603	2,697,964	956,486
St. Joseph	959,000	491,400	362,600	193,200
St. Louis	2,286,000	2,800,122	1,749,370	2,301,010
San Francisco,	.....	.....	.....	.....
tons	4,844	6,022	.....	.....
Texas City	.....	.....	94,000	.....
Toledo	331,800	172,200	507,545	118,769
Wichita	1,766,400	1,380,000	780,000	750,000

A NET LOSS of \$1,043,131 during 1921 was shown by the annual report of the American Linseed Co. After charging off inventories, losses, etc., there was a deficit of \$4,610,906. The 1920 report showed a profit for the year of \$6,238,597.





## Government Report on Farm Reserves.

Washington, D. C., Mar. 8.—The Crop Reporting Board of the Bureau of Markets and Crop Estimates makes the following estimates on the quantity of corn, wheat, oats and barley on farms Mar. 1:

**Corn on farms Mar. 1** was about 1,313,120,000 bus. or 42.6% of the 1921 crop, against 1,564,832,000 bus. or 48.8% of the 1920 crop on farms Mar. 1, 1921, and 1,045,575,000 bus. or 37.2% of the 1919 crop on farms Mar. 1, 1920; the ten-year average 1910 to 1919 is 36.7%. About 19.2% of the crop will be shipped out of the counties where grown, against 22.0% of the 1920 crop and 16.7% of the 1919 crop so shipped; the ten-year average is 19.9%. The proportion of the 1921 crop which is merchantable is about 87.6% (equivalent to 2,695,194,000 bus.), against 86.9% (2,789,720,000 bus.) of the 1920 crop and 87.1% (2,448,204,000 bus.) of the 1919 crop; the ten-year average is 79.6%.

**Wheat on farms Mar. 1** was about 131,136,000 bus. or 16.5% of the 1921 crop, against 217,037,000 bus. or 26.1% of the 1920 crop on farms Mar. 1, 1921, and 169,904,000 bus. or 17.6% of the 1919 crop on farms Mar. 1, 1920; the ten-year average is 19.8%. About 61.6% of the crop will be shipped out of the counties where grown, against 58.9% of the 1920 crop and 61.1% of the 1919 crop so shipped; the ten-year average is 57.7%.

**Oats on farms Mar. 1** was about 404,461,000 bus. or 38.1% of the 1921 crop, against 683,759,000 bus. or 45.7% of the 1920 crop on farms Mar. 1, 1921, and 409,730,000 bus. or 34.6% of the 1919 crop on farms Mar. 1, 1920; the ten-year average is 36.4%. About 23.8% of the crop will be shipped out of the counties where grown, against 28.9% of the 1920 crop and 26.4% of the 1919 crop so shipped; and a ten-year average of 29.7%.

**Barley on farms Mar. 1** was about 40,950,000 bus. or 27.1% of the 1921 crop, against 65,229,000 bus. or 34.5% of the 1920 crop on farms Mar. 1, 1921, and 33,820,000 bus. or 22.9% of the 1919 crop on farms Mar. 1, 1920; the ten-year average is 23%. About 36.1% of the crop will be shipped out of the counties where grown, against 36.3% of the 1920 crop and 34.2% of the 1919 crop so shipped; the ten-year average being 47.2%.

Details for important states follow:

## CORN.

State—	Stock on farms Mar. 1 in thousands of bushels (i.e., 000 omitted)	Per cent of crop of merchantable quality	1921.	1920.	1919.
New York ....	11,379	83	79	83	
New Jersey...	5,664	5,088	90	86	82
Pennsylvania ..	32,034	30,109	90	85	87
Delaware .....	3,471	3,893	86	88	83
Maryland .....	12,326	13,764	86	86	82
Virginia .....	20,944	29,390	85	85	85
West Virginia..	6,441	7,548	79	81	82
North Carolina	23,642	28,954	85	87	85
South Carolina	16,809	18,428	85	89	86
Georgia .....	37,087	32,948	82	83	85
Florida .....	4,633	4,151	79	80	82
Ohio .....	63,730	79,157	85	86	86
Indiana .....	76,432	99,846	80	88	88
Illinois .....	128,506	150,784	86	82	90
Michigan .....	24,574	23,952	84	85	84
Wisconsin .....	28,270	27,681	86	84	88
Minnesota .....	50,583	50,553	93	91	89
Iowa .....	222,095	265,328	95	93	96
Missouri .....	69,494	99,956	81	80	80
North Dakota..	3,219	2,322	76	70	82
South Dakota..	51,509	55,845	94	90	94
Nebraska .....	108,021	160,983	97	95	94
Kansas .....	39,835	71,650	91	93	83
Kentucky .....	33,682	50,844	77	78	74
Tennessee .....	43,542	50,137	82	84	73
Alabama .....	31,952	27,077	83	83	82
Mississippi .....	27,977	18,614	84	85	80
Louisiana .....	14,009	11,146	86	80	76
Texas .....	51,784	57,065	87	86	85
Oklahoma .....	29,232	33,953	89	91	88
Arkansas .....	24,661	21,809	83	85	70
Colorado .....	6,072	13,085	85	84	85

United States. 1,313,120 1,564,832 87.5 86.9 87.1

## WHEAT.

New York ....	2,362	3,877	45	35	35
Pennsylvania ..	5,962	7,945	38	37	39
Maryland .....	1,193	3,050	59	54	55
Virginia .....	1,909	3,568	20	26	25
North Carolina	990	2,546	2	5	3
Ohio .....	6,887	9,129	52	47	56
Indiana .....	4,113	5,741	56	56	60
Illinois .....	6,333	10,008	59	60	59
Michigan .....	3,237	4,307	55	51	55
Minnesota .....	6,236	9,859	62	60	60
Iowa .....	1,919	2,898	65	59	67
Missouri .....	5,169	9,037	57	54	60
North Dakota..	13,920	20,863	69	66	65
South Dakota..	5,975	7,538	65	67	70
Nebraska .....	10,778	19,958	72	72	74
Kansas .....	18,017	42,923	73	70	75

Kentucky .....	761	900	21	21	25
Tennessee .....	720	725	22	18	20
Texas .....	1,457	2,058	60	50	50
Oklahoma .....	6,152	12,438	65	61	70
Montana .....	4,789	5,738	65	54	22
Colorado .....	4,183	7,076	65	65	63
Idaho .....	4,333	6,150	62	59	57
Washington ...	4,373	5,416	70	70	75
Oregon .....	2,675	2,691	63	65	70

United States 131,136 217,037 61.6 58.9 61.1

## OATS.

New York ....	9,217	18,347	3	5	2
Pennsylvania ..	14,466	21,707	6	8	6
Ohio .....	14,106	31,311	28	31	28
Indiana .....	17,578	33,825	36	41	35
Illinois .....	46,262	78,749	46	48	45
Michigan .....	10,678	28,227	16	26	15
Wisconsin .....	23,025	47,466	6	13	12
Minnesota .....	38,612	66,636	23	29	20
Iowa .....	66,633	114,933	40	46	44
Missouri .....	15,895	25,740	11	18	16
North Dakota..	20,900	28,403	6	9	4
South Dakota..	26,235	39,232	29	32	30
Nebraska .....	35,027	48,165	25	32	27
Kansas .....	13,201	31,344	8	14	8
Texas .....	6,043	7,212	28	30	37
Oklahoma .....	12,002	20,691	15	25	20
Montana .....	4,531	5,746	7	15	6

United States. 404,461 683,759 23.8 28.9 26.4

## BARLEY.

New York ....	962	1,726	7	7	8
Illinois .....	1,502	1,992	34	29	33
Michigan .....	1,069	1,989	12	15	15
Wisconsin .....	2,873	5,251	12	20	22
Minnesota .....	5,493	8,279	38	40	44
Iowa .....	1,170	1,930	43	49	45
North Dakota..	5,436	6,836	20	25	17
South Dakota..	5,717	9,766	45	50	51
Nebraska .....	2,015	3,564	21	35	30
Kansas .....	5,280	9,351	20	34	32
Montana .....	444	461	6	10	4
Colorado .....	1,866	2,487	37	35	15
Utah .....	154	213	14	20	10
Idaho .....	668	966	27	29	21
Washington ...	587	1,042	35	24	37
Oregon .....	493	749	23	20	18
California .....	2,673	5,462	75	65	55

United States. 40,950 65,229 36.1 36.3 34.2

## Crops in Argentina.

The Canadian Trade Commissioner at New York City on Feb. 24 made public a cablegram received by the Dominion Bureau of Statistics from the Canadian Trade Commissioner at Buenos Aires communicating the official estimates of the production of wheat, flaxseed and oats in Argentina for the year 1921-22.

The estimates follow: Wheat, 154,691,000 bus., compared with 169,756,500 bus. in 1920-21; flaxseed, 31,495,000 bus., compared with 50,470,350 bus. in 1920-21; oats, 31,124,000 bus., compared with 44,806,000 bus. in 1920-21.

The home consumption of wheat in Argentina averages 69,813,000 bus. annually.

## Exports of Grain Weekly.

[From Atlantic and Gulf Ports, in Bus., 000 Omitted.]

	Wheat.	Corn.	Oats.
July 2... 5,586	6,851	1,848	56
July 9... 5,981	5,771	2,817	35
July 16... 5,807	8,556	3,016	89
July 23... 5,359	8,990	3,132	157
July 30... 7,015	7,033	3,192	43
Aug. 6... 10,355	6,375	2,897	52
Aug. 13... 7,777	7,220	1,787	102
Aug. 20... 9,682	6,919	2,254	63
Aug. 27... 12,628	11,253	2,339	122
Sept. 3... 8,690	6,425	1,469	9
Sept. 10... 10,609	8,203	2,223	55
Sept. 17... 8,200	10,902	3,981	67
Sept. 24... 7,515	10,572	3,341	76
Oct. 1... 8,186	7,476	3,025	75
Oct. 8... 7,395	7,427	2,302	297
Oct. 15... 5,210	9,345	2,925	323
Oct. 22... 7,782	7,985	1,999	401
Oct. 29... 7,849	8,189	1,136	212
Nov. 5... 4,944	7,768	1,790	463
Nov. 12... 6,291	6,072	1,513	474
Nov. 19... 5,907	8,113	2,145	1,061
Nov. 26... 4,153	7,988	1,624	170
Dec. 3... 7,420	8,009	2,108	466
Dec. 10... 5,748	7,256	1,172	209
Dec. 17... 6,018	7,924	2,424	231
Dec. 24... 6,267	6,510	2,253	250
Dec. 31... 4,685	5,509	1,176	144
Jan. 7... 5,484	9,429	3,009	504
Jan. 14... 5,747	6,457	2,651	264
Jan. 21... 5,455	4,782	3,363	1,029
Jan. 28... 3,473	6,257	5,937	1,130
Feb. 4... 3,215	8,814	4,712	1,476
Feb. 11... 2,499	5,131	4,770	1,240
Feb. 18... 3,803	4,776	4,851	1,155
Feb. 25... 4,731	3,968	5,058	1,518
Mar. 4... 5,484	5,469	6,351	3,153

Total since

July 1... 232,950 269,724 103,089 17,171 19,628 8,722

## Shipowner's Liability for Refusal to Carry Grain.

Harry C. Jones of Baltimore contracted with the agents of the British owned vessel Manhattan to carry 40,000 bus. of wheat to Hamburg, Germany, after he had sold and obtained an acceptance by cable of the grain by a German buyer at 19½ guilders per 100 kilos, specifying the name of the steamer.

Two weeks later the vessel agent told Jones he would like to substitute the steamer Maryland for the Manhattan. Jones cabled the German buyers three times for permission to change the vessel, but was refused each time.

Apr. 12 the agents offered the Maryland to Jones and stated that the boat would be ready to receive grain Apr. 16. On Apr. 17 the German buyer, who really represented the German government Food Commission, cabled he would agree to the substitution at a reduction of one guilder per 100 kilos in the price, which amounted to \$3,739.24. The agents would not make good this loss and Apr. 18 Jones cabled Hamburg to that effect, and notified the agents that the vessel would be held for damages.

Jones notified the owners of the Manhattan that he would sell the wheat for their account and risk, and did so on the floor of the Baltimore Chamber of Commerce, realizing \$10,689.23 less than would have been the net return had the grain been carried to Hamburg by the Manhattan. The cablegrams cost \$197.03, and when the contract was made Jones paid \$744.10 for exchange to cover, making Jones' total loss \$11,630.36. Jones brought suit for damages in the United States District Court, which said:

Libellant (Jones) is, however, not entitled to recover for any loss which it could have prevented. It might have accepted the proposition of the Hamburg buyer to ship the grain by the Maryland, at a guilder per 100 kilos below the original selling price. If it had done so, its loss would not have exceeded \$3,739.24, plus the cost of cablegrams. It did not, because, as it told the Hamburg buyer, it feared to prejudice its claim against the respondent, but that was not, under the circumstances, a sufficient reason for sacrificing nearly \$8,000 more by selling the grain in Baltimore. The libellant assumed that, if it sent the grain by the Maryland, it would waive its claim against the respondent for breach of contract. It could have protected itself from any such possibility by notifying the respondent that its forwarding the grain on a substituted steamer was not to affect its claim for the loss it had suffered by the change. If the respondent had refused to take the wheat under such terms, then the libellant might well have been justified in selling it here; but there is no hint in the record that respondent took any such position.

The most favorable rule of law for which libellant can contend measures its damage by the difference between what would have been obtained for the merchandise at the port of destination, if it had been shipped as the contract called for, and that realized at the time the shipment actually arrived. The libellant points out that, under the laws and regulations then existing in Germany, there was only one legal buyer of wheat, the German Food Commission, to which it had sold. True enough, but a responsible buyer had offered to take the grain at a guilder per 100 kilos less than the original contract price. The fact that such buyer was the original purchaser made no difference.

The libellant, if it had shipped by the Maryland, could have obtained a price only one guilder per 100 kilos less than it would have secured if the same merchandise had gone forward on the Manhattan, according to contract, and that, plus the cost of cablegrams, would seem to be the true amount of recovery to which the libellant is entitled.

The respondent claims that the libellant may not be awarded anything more than nominal damages, because it says that it offered to carry the grain on the Maryland at the same freight, and that it was not responsible for any special losses which the libellant incurred. The answer is that I find as a fact that the respondent perfectly well knew the custom of the Baltimore grain trade and contracted with reference to it. When it told libellant that it would sell space on the Manhattan, and not on a ship, it was aware that the libellant would necessarily have to contract in Hamburg for grain to arrive by the Manhattan, and that therefore the release of the German buyer and the resulting damage to the libellant would be the natural and proximate consequence of any failure of the grain to go forward by that vessel.

It follows that the libellant is entitled to a decree for \$3,936.27.—276 Fed. Rep. 823.





Beginning promptly at 9:30 a. m. each business day, and continuing at half-hour intervals thereafter so long as the principal grain markets of the country are in session, the air of the middle west, and to a slightly lesser extent that of the entire continental United States, is literally alive with grain market quotations. It is not incorrect to say that, wherever one may be, one has only to reach into the air above with the proper kind of "ears" to know exactly the price of the principal grains in the leading market places of the world. Eventually, perhaps, it may be possible to obtain in like manner the latest market news and gossip and to learn each moment the factors that influence the effect of supply and demand upon values of grain and allied products and commodities.

The state of affairs that now exists was brought about by the action of some of the grain exchanges in sending their quotations broadcast each half hour by means of the radiophone. On Monday, Mar. 6, the service was instituted at Chicago, the Board of Trade making use of the KYW radio station of the Westinghouse Electric & Mfg. Co. This station is located in Chicago, the aërials being on the roof of one of the large downtown buildings.

All that the grain dealer in the country need do to obtain the radiophone quotations is to install the necessary equipment, tune to the proper wave length, and listen. The reports are given in spoken words, so there are no dots and dashes to understand and to decode, and it is no more difficult to receive the messages by radiophone than to use an ordinary wire telephone. The service is being given on a wave length of 360 meters.

A description of the radiophone was given on pages 846 and 847 of the Journal for Dec. 25, 1921. The instructions that will be necessary in the installation of a receiving set will be furnished with that set by the dealer from whom it is purchased, and as these are simple and complete it will be found quite easy to follow them and to prepare an installation that will serve efficiently. The cost is not considerable, and indeed it is quite reasonable when compared with the expense of obtaining market quotations by any other means. After the original cost of the outfit the expense for maintenance will be negligible.

The country elevator offers a very good support for the aerial, which can be stretched from an insulated hanger at the top of the cupola to a similar hanger on the office or to any adjacent building of equal or greater height. The aerial should have no effect on the lightning hazard of the elevator, because the main wires will be insulated from the house itself; but if it is desired to make doubly sure the hanger itself can be grounded the same as any other lightning rod. The active wires of the aerial must not be grounded, of course. They are connected to the instruments and must be free to transmit to them the electrical impulses taken from the air. The length of the aerial has an indirect bear-

ing on the wave length, but if the aerial is longer or shorter than the standard for which a set is best adapted the difference will be made up in the tuning coils and the same satisfactory service will be obtained in either case.

If the progress of the radiophone in the next few years keeps pace with that of the recent past it may soon be possible for the grain dealer to have his market quotations with his golf game or his fishing trip just as he now has a cup of coffee with his breakfast. And, when the grain office is enveloped in the shades of night the dealer's family and their friends may repair to the elevator and "listen in" on musical programs, grand opera, the latest news flashes, and what not. The modern Robinson Crusoe can have his island abode and carry on his business by spoken word at the same time.

## Omaha Radiophones Quotations.

Coincident with the adoption of the innovation of sending market quotations by radiophone from Chicago, the Omaha Grain Exchange instituted a similar service. Reports are sent from Omaha at the following hours: 9:35 a. m.; 9:45; 10:45; 11:45; 12:30 p. m.; 1:30 and 8:00 p. m.

The scope of the service at present is the same as that from other markets where it has been inaugurated. Both futures and cash prices are sent out and to these are added such items of statistical information as are in effect market quotations.

All dealers are welcome to the Omaha quotations, which are dispatched on 360-meter wave length.

## Kansas City Now Using Wireless.

Another grain exchange which has adopted the practice of hurling its quotations into the air, thereby making them available to all who are interested enough to accept them, is the Kansas City Board of Trade. Here, as at Omaha and Chicago, the service began Monday, Mar. 6. Kansas City uses 375-meter wave length, and it is the plan to increase this to 485 later. In all other respects the service is the same as that maintained by the other markets, the quotations being given each half hour during the session.

A com'tee, consisting of William Murphy, H. A. Fowler and H. J. Smith, was appointed by the Board of Trade to handle the matter for the exchange. Mr. Murphy is now in Washington to confer with government officials regarding present regulations and possible restrictions in broadcasting quotations and information.

## At Other Markets.

The Wichita Board of Trade, the Minneapolis Chamber of Commerce, and other grain exchanges of the country, are considering the broadcasting of their market quotations.

In a comparatively short time it should be possible for any grain dealer in the United

States to receive quotations from his principal market, and many will be able to receive them from several markets.

While at present the quotations are being sent at half-hour intervals, it is almost certain that the time is not far distant when continuous quotations will be available.

## Recommendations for Radiophone Control.

Com'tees appointed by the radiophone conference recently held in Washington reported on Mar. 10 the recommendations they had agreed upon. It is expected that congress will be asked to incorporate the suggestions into the law relating to the subject.

Government control of all commercial wireless transmitting stations is urged; but receiving stations would not be so controlled. Twenty wave lengths would be allocated among the various classes of radiophone senders, amateur transmitting stations being given exclusive use of wave lengths from 150 to 200 meters, and would share wave lengths from 200 to 275 meters with technical and training schools.

Other recommendations are that wave lengths below 6,000 meters shall, in general, be required for radiophone service. However, those wave lengths which have become fixed in wireless telegraph service within this range for certain signals, such as S.O.S. calls, would be retained.

The com'tees expressed the hope and expectation that the radiophone may ultimately be assigned the whole range from zero to 6,000 meters.

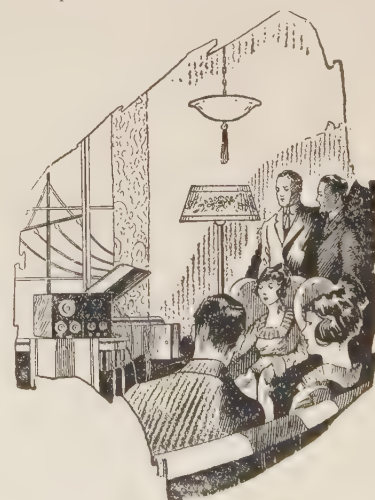
IN 1921 more than \$10,000,000 worth of goods of all kinds were stolen from freight cars while in transit in the Chicago area, according to a recent statement made by W. D. Dineen, chief special agent for the C. & N.-W. Ry. Of this amount one-half was recovered.

## Meeting of Illinois Farmers Elevator Ass'n.

The annual convention of the Illinois Farmers Grain Dealers Ass'n was held at La Salle, Feb. 14, 15 and 16.

Resolutions were adopted urging the construction of the Great Lakes-St. Lawrence Deep Waterway and the Lakes to Gulf Waterway; asking that the construction of hard roads in Illinois be carried out during 1922 so far as funds will permit; requesting congress to repeal section 15a of the Transportation Act; and pointing out to farmers that it is their duty to safeguard their present investments in elevator properties by putting their local organizations on a sound financial basis.

The annual report of Sec'y Lawrence Farlow, of Bloomington, showed a net increase of 8 fully organized and active companies during the year and a net increase of 5 in the membership of the Ass'n.



Listening to the Radio.



# Conference on Heat Damaged Wheat

One of the most important meetings for the consideration of the grading of grain held in recent years occurred in Oklahoma City on Mar. 1. Representative grain dealers of the Southwest, grain inspectors from several markets, and officials of the federal inspection supervision service took part in the conference, which was called by Frank Kell, of Wichita Falls, Tex., after a conference with officials of the Dep't of Agriculture in Washington.

The meeting was called to order by H. J. Besley, who is in charge of the grain division of the Dep't, and D. J. Donahoe, of Ponca City, Okla., was chosen to act with Mr. Besley as joint chairman.

Mr. Donahoe supplemented the explanation of the purpose of the meeting, as given by Mr. Besley in his opening remarks, by explaining something of his conception of the difficulties the country grain dealer has experienced in grading Southwestern wheat in recent months. He said that the farmer has only recently come to understand that the classification of heat damage is responsible for the failure of much of his wheat to grade, and he explained that the producer's side is the serious side of the case. Mr. Donahoe cited several cases of variations in the grade in cars of wheat, which he said were the class of instances that made it impossible for him to know how to grade or buy the grain.

Mr. Donahoe made it quite plain that the federal grain standards are satisfactory, and said he had no complaint to make; but he charged that an unscientific method of arriving at heat damage is in vogue. He made the claim that bin burnt wheat is always musty, and that there is only one reasonable method of determining whether a sample is bin burnt, and that by placing the hand in the sample of wheat and if it feels right and smells right it is not damaged by reason of having been burnt in the bin.

A system of inspection which entails hand picking of samples of grain at country stations Mr. Donahoe classed as being impractical and impossible of being carried out.

Jule G. Smith, of Fort Worth, related a case of his experience to show the position of the operator of a concentrating elevator. He said that unless the method of arriving at the determination of heat damaged wheat is changed there will result a lack of uniformity that will wreck all present federal standards.

J. C. Mytinger, of Wichita Falls, Tex., also spoke on the subject and presented evidence of lack of uniformity in specific cases. He expressed the hope that a solution of the difficulty can be found if all who are interested will work in unison, and he deplored the situation which he described as having made it possible for millers' agents in certain markets to congratulate themselves on being able to buy at a substantial discount choice wheat that would not apply on export contracts because inspection had placed a low grade on it on account of heat damage.

Frank Becker, of Houston, was asked to present the millers' side of the controversy. He spoke at some length, beginning by saying that he thinks both grain dealers and the inspection service have been at fault. He said that in his opinion wheat may be subjected while in the bin to sufficient heat to make it decidedly inferior as to milling quality altho it may not cause discoloration.

R. E. Nelson, of Clinton, Okla., pres. of the Oklahoma Grain Dealers Ass'n, said that he attempted at one time to apply the standards strictly at country points but found it difficult to do so; and he expressed himself as feeling that it is almost impossible to buy under the present discounts and expect to accomplish much. He said, also, that Oklahoma millers

have been very favorable to the dealers on the purchase of the wheat, and that little trouble has been experienced on this score.

This remark of Mr. Nelson's was particularly of interest in view of the fact that preceding speakers had referred to millers as willing to buy and mill wheat that could not be applied on export contracts because of its grade.

H. B. Dorsey, of Fort Worth, sec'y of the Texas Grain Dealers Ass'n, expressed it as his belief that the heat damage difficulty which has developed in the last few months has been largely overestimated, that much of the wheat classed as bin burnt is in reality only burned on the skin or outer coat and not actually damaged. He counseled caution in any action that would tend to upset the standards and, after having been called to order by Mr. Donahoe, said that he is of the opinion a great benefit can be gained if the Dep't of Agriculture will save some of the funds spent in its marketing activities and use the money to obtain better inspection uniformity.

Mr. Dorsey said that he believes much of the trouble has been occasioned by the holding of wheat, and that, altho perhaps 90% of the members of his Ass'n are country dealers, he has received very few complaints from members.

Mr. Mytinger took exception to Mr. Dorsey's remarks in this regard, saying it appeared that Mr. Dorsey was attempting by inference to leave the impression that the complaint originated with the terminal grain dealer and elevator operator. He said that he has heard many complaints on the part of country dealers.

In the afternoon session, representatives of the Dep't of Agriculture gave an extensive and detailed explanation of their work in the supervision of grain inspection. F. G. Smith, who is engaged in the work of inspection efficiency, submitted figures to show that inspection in Southwestern markets has been quite uniform, varying, to be sure, but running usually above 90% as against a possible 100% representing perfection.

R. T. Miles, in charge of inspection efficiency, supplemented the explanation that Mr. Smith had made.

O. F. Phillips, chairman of the Board of Review, gave a careful statement of the methods pursued by the Board in arriving at its interpretations, especially the interpretation as to what constitutes heat damaged wheat. He made it plain above all other things, that wheat must be "distinctly discolored" by external heat in order that it may be classed as heat damaged, and that when there is doubt in the mind of the inspector the wheat is to be given the benefit of that doubt.

Shortly before the close of the conference a resolution was introduced by Mr. Duncan, of Waco, Tex., and after second by Mr. Dorsey it was unanimously adopted.

This resolution made the following expression: "We believe in the present grain standards and we desire that no changes be made at this time."

The hearing was attended, in addition to those who have been mentioned, by other dealers and by many grain inspectors. On the following day the inspectors met with Mr. Phillips and the time was spent in intensive study of the interpretation of heat damaged wheat.

THE Engineering Standards Com'te has elected Albert W. Whitney, a representative of the National Safety Council, as chairman for the ensuing year. George C. Stone, a representative of the American Institute of Mining and Metallurgical Engineers, was re-elected vice-chairman.

## Shall Head Pulleys Be Lagged?

It has long been a mooted question whether the pulleys in elevator leg heads should be lagged or permitted to remain bare, and because of the undoubted fire hazard of all elevator legs the matter has become of prime importance to elevator builders, elevator operators and the insurance companies specializing in grain elevator business.

When legs were of low or medium height lagging was resorted to only infrequently because the weight of the material to be lifted did not require tractive adhesion between the leg belt and pulley above that given by the contact of the belt and the bare pulley itself. As larger and more efficient elevators were designed it quickly became apparent that great economy could be obtained by increasing the height of the structures, and this necessitated a corresponding increase in the legs used to loft the grain. It then was found that bare pulleys would give enough tractive adhesion only when they were made especially large in diameter and wide of face. This required large heads and wide leg casings, as well as wider belts, and the resultant cost defeated the purposes of desired economy. The expedient of lagging head pulleys then became the practice, and it continues to be followed in all large elevators.

In one of the country's largest elevators there are 38 main legs. It is not difficult to understand that an increase of even 25% in the width of the belt and casing of each, with correspondingly larger head pulleys, would mean a very great addition to the cost of building. It might even make it impossible to get the same number of legs in the present building.

The problem involved is largely one of engineering practice, and it must be solved by engineers in the light of technical knowledge and experience. The views on the subject that are given below are taken from letters written by some of the principal elevator builders, and give the opinions these men have formed as the result of their work in the field. Communications from others who have information on the subject will be welcomed.

### Lifts 100 Ft. Without Lagging.

We do not consider the lagged pulley at all necessary and we elevate grain 100 ft. satisfactorily with no lagging. We do not know of a fire caused by a lagged head pulley.

### Favors Larger, Unlagged Pulleys.

We consider it advisable to use larger head pulleys, unlagged, as we think most of the trouble with elevator legs has been due to the use of pulleys too small for the height of the leg. We do not understand why the lagged pulley should materially increase the fire hazard.

### Never Used a Lagged Pulley.

A lagged pulley is not necessary. In no case should the head pulley be less than 40 in. diameter and if larger it is all the better. A 40-in. pulley using a 12-in. belt gives 720 sq. in. of belt surface on the pulley; on the 48-in. pulley it is 864 sq. in., enough to break the belt. I have never yet used a lagged pulley. Do not think a pulley properly lagged will increase the fire hazard.

### Practical Tests Should Be Made.

We believe practical tests should be made to determine the merits of lagged and bare pulleys. We do not refer to laboratory tests, but practical tests. They should be made in a steel leg in a real elevator. The amount of slippage should be determined when using lagged and unlagged pulleys; how long will it take to burn a belt thru in each case. Then we will have some data upon which to work.

### Lagging Will Not Prevent Chokes.

We consider the covered metal head pulley necessary for heavy elevator work, but we know of chokes occurring with covered pulleys. No matter what character of pulley is used an elevator can be choked under certain conditions. Slippage cannot be avoided under certain conditions, but lagging reduces the possibility of slippage very materially.

[Continued on Page 321.]



# Chemical Test for Heat Damaged Wheat

By W. L. Frank, Chief Inspector, Grain and Cotton Exchange, Sherman, Tex.

The present method of determining *heat-damage* in wheat, is not an exact science. In fact, any condition or quality which must be determined "by the eye," is likely to be given varying interpretations. This is especially true of heat-damage in wheat, where there are so many "degrees" and variations.

**Gluten of Wheat Affected by Heat:** Wheat and wheat flour contain "gluten." Gluten in turn consists of two substances, namely *glutenin* and *gliadin*. Both of these substances are necessary for the formation of gluten and are not found in other cereal grains or their products. When flour is mixed with water, and a dough is formed, it is gliadin that binds the mass together and makes the dough tough and coherent. Glutenin prevents the gliadin from being washed away. Heating wheat or flour to a sufficiently high temperature destroys the adhesive or dough-making quality of the gluten. I will quote Jago by way of explanation of the effect of heat upon gluten: "\*\*\* on warming flour for from 48 to 96 hours, keeping the temperature below 60° C., \*\*\* and then adding a little unwarmed flour and extracting gluten from the mixture, no gluten is obtained beyond that present in the added flour, showing \*\*\* that the gluten-forming substance had suffered coagulation."

**Bamihl Test for Gluten:** This test is used to detect wheat flour mixed with flours made from other cereals, etc. A small amount of the flour to be tested (1 to 2 milligrams) is placed on a piece of clear glass (microscope slide). Add one drop of a solution made up as follows—1000 cc of distilled water to which 0.2 gram of water-soluble eosin has been added. Mix the flour and liquid with a second piece of glass (use a cover glass if available.) Hold the upper glass at an angle until the flour and liquid are well mixed and a pasty mass is formed. Release the upper glass and rub back and forth, exerting a slight pressure until the gluten in the paste between the two glasses has been collected into oblong masses or "rolls."

"Wheat flour, or other flours containing it, yields by this treatment a copious amount of gluten, which absorbs the eosin with avidity, taking on a carmine color. Rye and corn flour yield only a trace of gluten, \*\*\*"

(Quotation is from *Methods of Analysis of Cereal Foods* compiled by B. R. Jacobs.)

The oblong masses or rolls described above, are highly colored by the eosin from the solution, and can be plainly seen with the naked eye, when held over a sheet of white paper.

**Note:** For a more detailed description of the "Bamihl test for gluten" consult, *Food Inspection and Analysis*, by Leach, 3rd Edition, pg. 322.

**Principle of Heat-Damage Test:** From the facts cited above, one would naturally conclude:—

1st. That heat-damage may destroy the adhesive or dough-making quality of the gluten contained in the individual kernel of wheat. Experimental tests on unmistakably heat-damaged kernels confirmed this conclusion.

2nd. That damage from heat which has not been accompanied by the destruction of the adhesive or dough-making qualities of gluten in individual kernels of wheat, should not be considered as heat-damage.

3rd. That the gluten in sound kernels of wheat would respond to the "Bamihl test for gluten" in the same manner as that in wheat flour. Such has been found to be true.

4th. That the gluten from heat-damaged kernels of wheat would not form gluten masses or "rolls" when subjected to the "Bamihl Test for Gluten." This has been proven by tests.

5th. That the gluten in heat-damaged kernels would absorb the eosin, but on account of its non-coherence, the appearance of the

gluten would be that of many tiny specks of highly colored material scattered throughout the pasty mass. This statement has been verified by numerous tests.

6th. That many kernels which have been more or less discolored would respond in the same manner as sound kernels, while others would respond as has been described under 4 and 5. Tests have confirmed these surmises.

**Methods of Making the Test:** Make a few tests on wheat flour first, then try rye flour, corn flour, or pure buckwheat flour. Note carefully the development and appearance of the highly colored gluten masses or "rolls" in wheat flour.

Select several sound kernels, a few distinctly heat-damaged kernels and some others that are only slightly discolored. Proceed as follows, taking one kernel at a time,—

Cut off the germ and brush ends of the kernel. Remove the bran from the central portion of the kernel using a sharp knife or razor. Grind the remainder of the kernel in a steel or porcelain mortar to a fine powder or "flour." Transfer the "flour" to a piece of glass (rejecting any bran particles that may be present) and add one drop of the eosin solution and mix into a paste as described above.

**Practical Value of Test:** The value of the test is mainly in determining what constitutes heat-damage in wheat. The average inspector will not be called upon to make this test in actual grading work, but it would be a good thing for him to know how to test "doubtful" kernels. Likewise the Board of Review can use the test in checking up its interpretation of heat damage in wheat.

While this test is strictly a qualitative test, investigations not yet conclusive, point to the possibility of developing simple quantitative test, that can be used by any inspector in determining heat-damage in wheat.

**Note:** The "test" as described, has, in the main, justified the present interpretation of heat-damage in wheat.

## Shall Head Pulleys Be Lagged?

[Continued from page 320.]

### Lagging Not Necessary.

I do not consider lagged metal pulleys necessary for a lift of 125 ft. Keep the belt tight and have them run as near center of pulley as possible. I consider metal pulleys safe from fire hazard without lagging, that is, when they are of large size, say 48-in. diameter and up. Bearings and pillow blocks should have hard oilers with compression cups. I have found them with the oil holes or slots caked full of oil and dust that could only be removed with a sharp instrument. No oil got on these shafts. Tops of pillow blocks should be cleaned at least twice a year.

### Unlagged Pulleys Could Not Be Used.

Plain pulleys cannot be used in a great majority of the elevators as now constructed. They are too high and the space provided for the leg is not of sufficient width to permit of a wide enough plain pulley being used to carry the desired load without slipping. Therefore, the lagged pulley is a necessity. The laggings should be of rubber belting, 4 or 5 ply. All leg pulleys, whether lagged or plain, have a certain fire hazard and the only solution to safeguard all conditions is to stop the power that drives the leg whenever the load in the leg approaches the danger point.

### Increase Size 25% to Eliminate Slip.

If, in figuring the size of the leg, 25% be added to the indicated size for the capacity given, the slippage will be eliminated. We refer to an addition of 25% in the width of belt and buckets. A leg of this kind will not be overloaded.

Using this plan, we do not lag pulleys, altho we do not know of any place where a choke has occurred because of a lagged pulley. We do not believe slippage can be prevented by increasing

the diameter of the head pulley, and we would consider a lagged metal pulley safe from fire danger.

### Lagging of No Benefit.

I do not consider that a lagged metal head pulley is necessary for the efficient operation of an elevator leg of more than the ordinary height. The reason I take this view is that the lagging of a pulley only gives more bearing surface for the belt and this can be obtained by installing a new pulley of larger diameter, unlagged.

Much of the slippage of belts is caused by the use of belt dressing, which is especially objectionable in elevators where dust is present. The dust will stick to the pulleys, and in time will leave great balls for the belts to run over and this will increase the friction.

### Lag Above 2,500-Bu. Per Hour Capacity.

The specifications for an elevator leg head pulley are due jointly upon the type, size of the pulley itself, the material to be elevated, and the distance between boot and head shafts. In ordinary elevator legs it has been our practice to vary the diameter of the head pulleys to suit the load handled as much as possible, but this is impracticable for all cases and then lagging is used. In legs of 2,500-bus. per hour and up, lagging is used. Under this, the bare cast iron pulley can be used in most cases, altho lagging is highly preferable. We consider lagged head pulleys a necessity and have seen no great harm from the standpoint of the fire hazard.

### Lag Pulleys, or Decrease Belt Strain.

We consider that a metal pulley should be lagged when used for an elevator head pulley of leg more than 50 or 60 ft. high, in order to prevent the belts slipping when carrying anything like the required load. For many years we have lagged all head pulleys, using 4 or 5 ply rubber belt. We consider a paper or wood lagging as satisfactory, but without doubt the rubber belt is cheaper on account of the ease of its application.

We think that if an elevator belt were made much wider than usual and the buckets smaller, so that the working strain on the belt would be cut down appreciably, a metal pulley not lagged would be satisfactory.

### Would Lag All Pulleys.

I most certainly do consider lagging the head pulley necessary for the efficient operation of an elevator leg of more than the ordinary capacity. Otherwise the full carrying capacity of the buckets can not be used. I lag 90% of the head pulleys I put in and would lag the other 10% if I had my way about it. Use a rubber lagging well bolted or riveted to the pulley.

I have never known of a choke where the head pulley was lagged, except when some solid object was allowed to get into the bin and feed to the boot and the result in these cases was to stop the leg belt and throw off the motor or engine belt, these always being placed on unlagged pulleys. The lagged pulley is safe from the fire hazard standpoint.

### Unlagged Pulley Has 40% Less Capacity.

An elevator operator, having a big plant in Indiana, was told by an insurance inspector to remove the lagging from a steel head pulley. The owner complied with the request, but objected to it, on the ground that it actually increased the fire hazard instead of diminishing it as the inspector believed. He said that an engineer told him that with the lagging "there is friction and without it, no friction." He wanted to put the lagging back on. By actual experience with the plant after the removal of the lagging, he found that the capacity of the leg was reduced 30% to 40%.

### Require All Pulleys Lagged.

For legs of the heights that obtain in practically all grain elevators, the weight of grain being elevated absolutely requires that the head pulley be lagged to increase the friction between the belt and the surface of the pulley. Our specifications require that all head pulleys be lagged, the lagging consisting of what is termed "rubber covering," being rubber belt securely bolted to the face of the pulley.

We know of no case where fire occurred because of the use of a lagged metal pulley, and fires that have resulted from friction out of lagged pulleys we believe would also have resulted if a plain pulley had been used. The elevator leg will always be in some degree a fire hazard, but the lagged pulley is less a culprit than the plain cast iron pulley.

[Continued in next number.]



# Modern Methods of Transmitting Power

To operate grain handling machinery nearly every form of power transmission has been used. As in other mechanical plants the conditions surrounding the operation have controlled the choice of the type of transmission to be employed. Wire rope transmission is adapted to distances greater than those found in grain elevator work, and very few of this type can be found. Considerable belting of leather or rubber is used, not so much for transmission as for driving of machines, the belt having the advantage that it can be used with tight and loose pulleys to throw the power on and off. Electrical transmission is common in the larger elevators having individual motor drives for each machine. In elevators of all sizes, however, rope transmission can be found, as the rope has been recognized as most adaptable to driving the elevator legs. In large terminal houses, especially, the rope drive for the legs has been found indispensable owing to the ease with which it adapts itself to driving vertically or in any direction and its capacity to transmit unlimited power, the elevator head pulleys requiring each more power than any other single machine in the elevator.

## Silent Chain Drives in Grain Handling Plants.

Coincident with the general use of the electric motor as a prime mover in grain handling plants, there grew up the practice of providing each group of machines, or each individual machine, with a motor of its own, thus gaining the additional advantage of placing the driving mechanism near the driven machine with a consequent saving of space and power transmission equipment. This practice led to the widespread use of silent chain drives for transmitting power from motors and counter-shafts to elevator legs, conveyors and other machines.

The silent chain might be termed a form of flexible gear because it operates over toothed sprockets. In all essentials of manufacture and operation it incorporates the principles of toothed gears while giving the added advantage of flexibility. A silent chain consists of a number of steel links accurately stamped as to pitch and shape, and held together by means of joint members that reduce wear and friction. These links are assembled to make successive rows of teeth which, meshing with the teeth of the sprocket wheels, transmit power from driver to driven with a degree of efficiency closely approximating perfection. A rate of efficiency of 98.2% is claimed for this form of transmission.

In the early forms of silent chain the individual links were held together by pins that bore directly against the metal of the links themselves, but this quickly became objectionable because there was a decided tendency to wear the holes in the links out of round. The oblong hole thus formed gave lost motion and decreased the chain's efficiency. Various manufacturers have evolved different means for providing an improved joint. In some chains the holes are bushed with liners that can be removed and replaced, and the pins and liners are of a special grade of wear resisting steel. In others, a form of rocker joint is built up, using two pieces of special hardened steel. While wear is inevitable in any chain it is reduced to a minimum by these joint devices and by proper lubrication, and as a still further advantage the joint members themselves can be changed when occasion re-

quires it. Thus the necessity of scrapping the entire chain is avoided.

In the use of silent chain it is possible and desirable to use short centers between the motor or shaft and the driving medium, thus saving materially in the space required. In some cases where alterations have been made in plants, it would have been necessary to build additions to the buildings in order to use flat belts which require considerable distances between centers, while by using silent chains the existing buildings were large enough and actually gave room to spare. In installing drives for conveyors over bins, for example, a 20-h.p. motor with a chain drive would require but 6 ft. overall in floor space, lengthwise, including the motor frame; a marine leg drive up to 50 h.p. would require approximately the same space. Small drives for power shovels and similar machines can be located out of the way in very small space.

**Speed Reduction:** In most grain elevator drives, especially where electric motors furnish the power, the problem of speed reduction becomes of great importance. Here the silent chain is of especial benefit as large reduction ratios can be obtained. To drive an elevator leg head shaft, which must move at comparatively slow speed, with an induction motor that can only operate efficiently at high speed requires a reducing medium that is capable of rendering the service without danger of failure, and this the chain will do. Moreover, the chain gives a constant and unvarying speed on the driven shaft, regardless of atmospheric or other conditions, and this is highly desirable in grain elevator operation.

The silent chain cannot slip; it is run slack, and therefore without excessive journal friction; and there is no dangerous sparking. The latter feature is particularly interesting to the grain elevator operator, who must always consider the dust explosion hazard and take whatever means he can to reduce or to eliminate it.

In selecting a silent chain drive it is necessary first to learn the number of revolutions per minute of the driving and driven shafts, then to determine what is a suitable combination of toothed sprockets. Then, working with the smaller sprocket, a pitch of chain must be selected that when run over the small sprocket at the desired number of revolutions per minute will bring the chain speed within the limits most likely to produce a durable and economic drive. Chain travel of 1,000 to 1,300 feet per minute is considered most satisfactory. Having selected the pitch and speed of chain, a width that will transmit the required number of horsepower must be chosen, and the length determined. Speed, pitch and width can be learned from manufacturers' tables when the necessary factors are known. The length, also, will have to be worked out from tables obtained from the same sources, as it is dependent upon certain weighted values that have been worked out by engineers specializing in chain drive design.

**Installation:** To obtain satisfactory service from a silent chain drive, the bearings must be upon firm foundations, rigidly held so the shafts cannot tremble or pull together. The shafts, and sprockets, must be level, and they must be parallel one with the other; and they sprockets must be in line. These factors are important, as failure to observe them will cause the chain to pull unevenly upon the teeth, thus causing unnecessary and uneven wear. To keep the chains in proper alignment on the sprockets, some manufacturers use a groove in the sprockets with corresponding guide links that run in the grooves, while

others use flanges on the outer edges of sprockets. These flanges may be plates or wires.

The actual placing of the chain is not a difficult task, as it will come with all links assembled, and only the final operation of putting on the sprockets, drawing together and fastening remains. The chain is wrapped around the sprockets, the two ends brought together, and the pin, bushing or other joint members inserted. As silent chains must be assembled in multiples of two pitches it cannot be shortened one link without using a special offset, or hunting link. All manufacturers furnish these.

A number of special devices are available, such as spring sprockets for drives where the load causes pulsations, spring center sprocket wheels to absorb shocks, slip wheels where there is heavy fluctuations in the load, and shearing pin sprockets when danger of damage to the driven machinery exists. These, however, are necessary only in unusual cases and they do not demand general consideration.

**Cases for covering silent chain drives** are always desirable from the standpoint of safety to employes, and in a grain elevator, where dust is ever present, they are practically a necessity. The cases may be made oil tight and caused to serve as an oil reservoir so the chain will run at all times in an oil bath. In installations of this kind the oil level should be high enough to cover the chain at its lowest point. In its travel, the chain will then carry the lubricant thruout its entire length. Sometimes it is desirable to add an oil pump or a revolving disk carried by the shaft to lift the oil to the top of the case from whence it may fall upon the moving chain. When a case is not provided, the chain should be lubricated twice a week or oftener with a good grade of chain oil. This can be most conveniently applied with a brush wide enough to cover the chain, and the oil should be applied on the inside when the drive is running slowly, if possible, in order that it may be carried into the joints by the centrifugal force set up by the motion.

Occasionally a chain should be cleaned thoroughly. This means that it should be removed from the drive and washed in gasoline or kerosene to remove all traces of old oil and caked oil and dirt. After drying, the cleaned chain should be immersed in a good quality of lubricating oil before it is replaced on the drive.

**Durability:** A good silent chain drive, properly installed, will render satisfactory service for a long period; and when a new chain is required the old one will give notice of the fact sufficiently in advance to enable the operator to avoid breakdown. It does it in this manner: as the chain wears it lengthens in pitch and automatically assumes its true pitch circle by gradually climbing further and further out on the teeth of the sprockets. By watching for this climbing, and noting its progress, the operator will be warned when he must provide a new chain. When it is near the top a new chain, or repair parts for the old one, should be ordered. The chain should never be allowed to climb over the teeth and jump from them, as in this case it would quickly damage the teeth beyond repair. The lengthening of the pitch can be overcome by installing new joint members as well as by using an entire new chain. The difficulty cannot be overcome by substituting new sprockets as the lengthened pitch of the chain is alone responsible.



## Rope Transmission.

**ROPE TRANSMISSION.**—Manila hemp rope is made up of the fibers of a plant grown in the Philippine Islands, known as the *Musa textilis*, something like the banana tree, the fibers being taken from the outer covering of the leaf stalk which grows 15 ft. long, the fibers as prepared for the rope running from 4 to 12 feet in length. The tensile strength of manila fiber will average over 30,000 lbs. per square inch of section, and some official tests at Watertown, Mass., have shown over 50,000 lbs. Manila rope is as strong as a solid steel bar, weight for weight, though only about 11½ per cent as strong for equal cross section. Leather is only 5 per cent as strong as steel of equal cross section, and only 40 per cent as strong, weight for weight.

Rope will transmit power long distances at much less cost than over a long and expensive line shaft; but when the distance exceeds a certain point electrical transmission is cheaper. Within limits the rope is most economical of all. Rope drives have the disadvantage of greater journal friction than with gearing, and the loss of power is 5 to 10 per cent greater than with gearing. The cost of rope drives is less than of belt drives on account of the smaller cost of rope. Rope drives can be carried 200 ft. in alleys and 500 ft. in the open with idlers. Close driving also is possible, rope drives having replaced gears with no change of centers. Rope drives are noiseless. The elasticity of the rope and the slack between pulleys take up inequalities in power and load, giving steady running. The ropes do not generate frictional electricity.

In designing a rope drive the largest sheave should be used that conditions will permit and then the largest rope possible should be used having regard to the rule that the diameter of the rope should not exceed one-fortieth to one-thirtieth of the diameter of the smallest sheave. The reason is that small ropes wear out faster than large ropes transmitting the same power. A large number of small ropes and smaller sheaves are cheaper in first cost than fewer large ropes and a larger sheave. Speeds are limited by the centrifugal force, which at more than 5,000 feet per minute tends to throw the rope out of contact.

Cotton ropes can be run at 7,000 ft. per minute and will stand a greater tension than manila, but do not seem to have as much favor in the United States as in England. Ropes ¾ inch or less in diameter have lasted only a year and some only 6 months, while 1 to 2 inch ropes will last 2 to 6 years and larger ropes have lasted 10 years.

A formula useful in designing given by Professor Flather is:

$d$  = diameter of rope in inches.  
 $w$  = weight of rope in pounds per foot.  
 $S$  = breaking strain in pounds.  
 $t$  = normal working strain in pounds.  
 $x$  = an empirical co-efficient.

Then

$$w = 0.3216d^2.$$

$$S = 100d^2x$$

$$t = 200d^2$$

$$x = 81 - 9d.$$

The weight of manila rope in pounds per foot is: ¾ inch diameter, 0.18; 1 in., 0.32; 1¼, .50; 1½, .72; 1¾, .98; and 2 ins., 1.28 lbs.

When wear is considered the minimum cost occurs at a speed of 4,500 ft. per minute.

To increase the arc of contact drives should be designed to have the slack side on the upper part of pulleys. Tension weight to be used will depend on the arrangement of drive. Usually 31 pounds for a ¾ rope, 45 for ¾, 62 for ¾, 82 for 1 inch, and 127 for 1¼ inch will be found about right.

The horse power of manila rope drives can be calculated with mathematical accuracy by engineers using a formula considering the working strength of the rope, velocity, frictional adhesion in groove and the centrifugal force to overcome. It will work out in practice that at 4,500 ft. per minute a ¾ inch rope

will transmit 7.3 h.p.; ¾, 9.8; 1 in., 12.9; 1½, 16.3; 1¾, 20.2; 1¾, 24.5, and 1½, 29.5 h.p.

Tension carriages are necessary because rope shrinks one to 4 per cent on getting damp or wet. Pulley grooves should be turned smooth in the machine shop, otherwise the inequality in the surface will break the fiber on the surface of the rope, which will have a very short life. Ropes should be kept out of contact with other ropes or with obstructions such as posts, walls and beams. As the natural wear of the rope takes place in its interior which is difficult to reach with external applications of lubricant, this should be applied when the rope is made. The lubricant usually is a mixture of graphite and tallow, put in by the rope manufacturer.

It is a mistake to put grease or tallow on a rope after it has been installed in a grain elevator or cement mill where light dust is floating in the air. The grease put on the rope will smear the grooves in the pulleys where a crust of dust and grease will accumulate and dry hard. In a grain elevator at Toledo, O., this accumulation of dirt in the groove of a rope that had been greased caused the rope to jump from the sheave and wreck the whole drive.

Rope should be kept clean of sand, mud and grit. Dragging a rope over the ground allows it to pick up grit which works into the rope when used. Dry rot will result when a rope has been waterlogged and not given an opportunity to dry out in the open air.

**SPLICING TRANSMISSION ROPE.** The standard method of making the long splice for transmission rope is shown in the engravings herewith and described by Professor Flather as follows:

1. Tie a piece of twine (9 and 10, Fig. a) around the rope to be spliced, about six (6) feet from each end. Then unlay the strands of each end back to the twine.

2. Butt the ropes together and twist each corresponding pair of strands loosely, to keep them from being tangled, as shown in Fig. a.

3. The twine (10) is now cut, and the strand (8) unlay and strand 7 carefully laid in its place for a distance of four and a half feet from the junction.

4. The strand 6 is next unlay about one and a half feet and strand 5 laid in its place.

5. The ends of the cores are now cut off so they just meet.

6. Unlay strand 1 four and a half feet, laying strand 2 in its place.

7. Unlay strand 3 one and a half feet, laying in strand 4.

8. Cut all the strands off to a length of about 20 inches, for convenience in manipulation. The rope now assumes the form shown in Fig. b, with the meeting-points of the strands three feet apart.

Each pair of strands is now successively subjected to the following operations:

9. From the point of meeting of the strands 8 and 7 unlay each one three turns; split both the strand 8 and the strand 7 in halves, as far back as they are now unlay, and the end of each half-strand "whipped" with a small piece of twine.

10. The half of the strand 7 is now laid in three turns, and the half of 8 also laid in three turns. The half strands now meet and are tied in a simple knot 11 (Fig. c.), making the rope at this point its original size.

11. The rope is now opened with a marlin-spike, and the half strand of 7 worked around the half strand of 8 by passing the end of the half strand through the rope, as shown, drawn taut, and again worked around this half strand until it reaches the half strand 13 that was not laid in. This half strand 13 is now split, and the half strand 7 drawn through the opening thus made, and then tucked under the two adjacent strands, as shown in Fig. d.

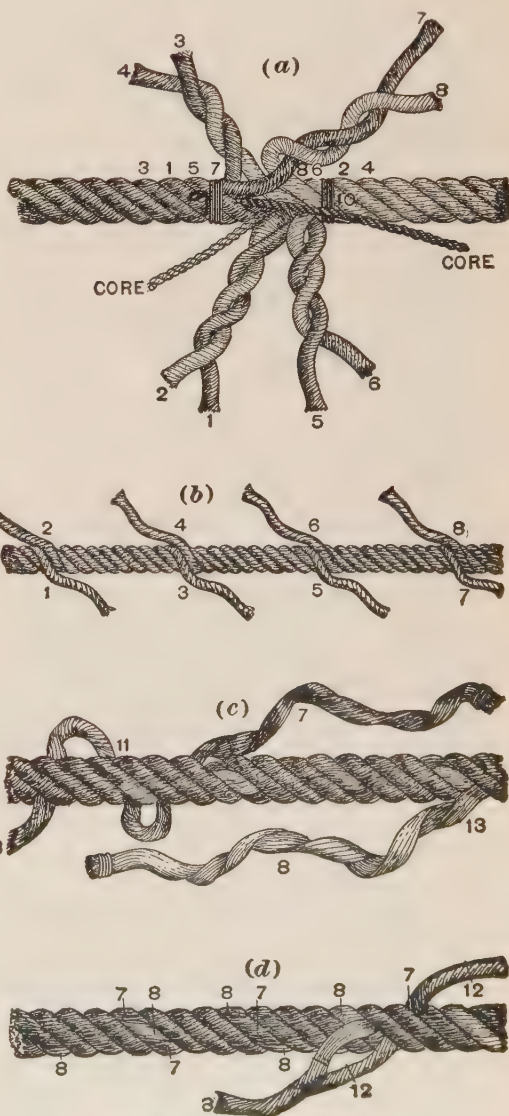
12. The other half of the strand 8 is now wound around the other half-strand 7 in the

same way. After each pair of strands has been treated in this manner, the ends are cut off at 12 leaving them about four inches long. After a few days' wear they will draw into the body of the rope or wear off, so that the locality of the splice can scarcely be detected.

For a three strand rope of the same size, the foregoing method is slightly modified. After tying the twine 9 and 10 around the rope about 6 feet from each end, unlay the strands back to the twine, bring the butts together, and twist the corresponding strands loosely together. Now cut twine 10, and unlay strand 8 for a distance of four and a half feet from the junction, and lay in strand 7. Unlay strand 1, four and a half feet; lay in strand 2, and cut all the strands off to a length of about 20 inches, as before explained for convenience in handling. The splice now assumes an appearance similar to Fig. b., with the exception that there are only three meeting-points of the strands, and these are four and a half feet apart.

Each pair of strands is now subjected to the series of operations described for the 4 strand splice, in steps 9 to 12 inclusive.

**WIRE ROPE TRANSMISSION.** The principles governing transmission of power by wire ropes are much the same as with manila rope, with two important differences. With wire the shafts must be in perfect alignment to prevent the wheels from wobbling and causing the rope to jerk. With wire it is essential to use sheaves of larger diameter than with manila rope, as broken wires are due to excessive bending. Corrosion, overstrain and abrasion shorten the life of wire rope and



Splice for 1 1/4 Inch Four-Strand Rope  
Fig. 6, from Flather's "Rope Driving"



should be avoided. Proper lubrication will prevent corrosion and a good coat of boiled linseed oil is recommended to prevent rusting. Exterior wear is due to faulty grooves in wheels or to grooves that are too small or too rough.

When designing a wire rope drive it is well to bear in mind that the wear increases with the speed, so that it is better to increase the load than the speed. Grooves should be a trifle larger than the ropes, which should run around the sheaves without chafing the sides of the grooves. Formerly cast iron sheaves with grooves filled with end wood were common, but now good practice is to fill the grooves with rubber, for the use of standard wire rope. A 1-inch iron wire rope will transmit 65 horse power at a speed of 4,500 ft. per minute, with the sheaves 100 feet apart while a manila rope will transmit only 12.9 horse power at the same speed. An increase over 100 feet in the span adds to the weight of the wire, increases the tension and transmits more power by about one per cent for each foot of increase in the distance.

Marline covered cable is a development of recent years in power transmission more closely resembling manila rope. These marline covered wire ropes are used by running small ropes around comparatively small sheaves as in the American continuous system. By taking out the old manila rope and putting on a marline covered wire rope greatly increased power can be transmitted, provided the shafting and sheaves can bear the increased load.

### Ball and Roller Bearings.

**BALL BEARINGS.** The old style of bab-bitted bearings for lines of shafting transmitting power is a notorious waste of power in friction and a common cause of fires. These bearings drop oil on the machinery and into heaps of dust where the so-called spontaneous combustion may originate. The use of bab-bitted bearings limits the speed at which shafts can be run without overheating. Even tho lined up when first installed the bearings on line shafting or on machines may get out of line due to the shifting of the load on the floor and compel shutting down the machinery. Such aligning devices as cradles, compass-box suspensions and gimbals add to the complication and expense. The saving in belts and oil in a year often will pay for the added cost of installing roller or ball bearings which do away with all the drawbacks of the bab-bitted bearing.

Roller bearings are a great improvement over the sliding bearings in the saving of power due to the elimination of friction; but for lines of shafting the self-aligning character of ball bearings gives the latter first place.

Tests were made during a period of four years by the University of Wisconsin with 20 ring oiling bearings, bab-bitted; 20 roller bearings, and 20 ball bearings, with a shaft running 235 r.p.m. With an average load per bearing of 1,227 lbs. the coefficient of friction was 0.0022 for ball bearings, 0.0055 for roller bearings and 0.0082 for bab-bitted bearings. Stated in another way the power consumed in friction in the bearings was 1 for ball, 2.2 for roller and 3 for bab-bitted. These were well made bab-bitted bearings. Ordinary bab-bitted bearings will consume 10 to 20 times as much power as a ball bearing, or about 5 per cent of the whole power.

Among the advantages of ball bearings are: Oiling is required only once or twice a year. The consumption of power is greatly reduced. Space is economized on shafting. All possibility of hot boxes is obviated. Cleanliness is promoted, since leakage of oil is prevented. All of these advantages are not obtained unless the bearing is self-aligning. The self-aligning character is accomplished by giving the outer race of the bearing a spherical face, permitting the inner race and balls to select their own path of travel, within the limits of the outer race. It is immaterial whether or

not the shafting is deflected out of line.

The care of ball bearings consist of a thoro cleaning of the interior of the housing with gasoline or kerosene oil and the supplying of a fresh lubricant, which should be free from acid, alkali or grit.

### Gears For Speed Reduction.

Electric motors of the type suitable for installation in grain handling plants operate efficiently only at rather high speeds. Elevator leg head shafts must turn quite slowly, and the same rule applies to a slightly lesser extent to the driving rolls of belt conveyors and to other machinery.

These facts make it necessary that some means of reducing shaft speeds must be interposed between electric motors and elevator heads and other grain handling machines; and the problem resulting from this necessity has required the best efforts of engineers in its solution. Not much of a problem existed when steam or internal combustion engines were used as prime movers in practically all plants, and when the power was communicated thruout the house by means of long lines of shafting and belts, chains or ropes. While these devices were not altogether satisfactory they have now been supplanted to a great extent by the use of electric motors and individual group drives. The most desirable method of motor installation is to install the motor near the machine it is to operate, connecting shafts direct or using some form of short transmitting medium. Direct connection is practically out of the question in the elevator because of the difficulty of obtaining exact alignments and because of the necessity for speed reductions.

Speed reduction on short centers may be satisfactorily accomplished by means of open gears, silent chains or enclosed spur or herringbone gears. Open gears are not to be recommended when their use can be avoided. Silent chain drives are considered in detail elsewhere in this number.

Gear speed reducers, or speed transformers as they are termed by some manufacturers, are self-enclosed combinations of spur or herringbone gears which are to be set in axial alignment with motor and driven shaft, and which are direct connected to the high speed driver and the low speed driven mechanism. The necessary reduction takes place within the reducer itself. This, being entirely enclosed except for the shaft which communicates the power, appears to be a metal box without much relation to the remainder of the plant; and because of its simplicity and efficiency it requires little attention other than the occasional replenishing of its supply of oil.

The required ratio of reduction is previously worked out in the gear reducer and its functions are performed positively and with practically no loss of efficiency. The claimed rate of efficiency is 98% to 99%, which compares most favorably with other members of the power transmission equipment. They give absolute safety to employees, all moving parts being contained within the case, and are free from noise and vibration. The enclosed feature is especially desirable in grain handling plants, where dust and dirt are always present, and self-oiling features (usually providing for forced feed) reduce to the minimum the amount of care required.

Some speed transformers may be reversed and used to step up the speed as well as to reduce it, but this feature will seldom be of interest to the operator of a grain handling plant.

The gear speed reducer possesses the feature of requiring less space for its installation than many other transmission devices accomplishing a similar purpose, and this is highly desirable in grain handling plants where a slight increase in floor area may entail great additional construction of walls and, other building members that in themselves serve no useful purpose. Sometimes space is all important in an elevator, where the insertion of an extra leg may mean the difference be-

tween economical operation and absolute waste that would make the plant a liability to its owners rather than an asset.

Gear speed reducers require a high degree of alignment between the reducer itself and the driving and driven shaft, but this is not an insurmountable obstacle in up-to-date reinforced concrete plants. In a wood elevator of the older type it might obviate the use of such a reducer. However, suitable types of flexible couplings are available, and these will often serve to overcome alignment troubles and make it possible to use the speed reducers where otherwise they might be excluded.

### Belting.

**LEATHER BELTING.** Belting of leather or rubber is commonly chosen to drive grain cleaning machinery, shellers and clippers and all light powered appliances. The width of pulley installed on the machine will suggest to the user the required width of belt. Narrow and thick belts work better than those that are wide and thin. Double leather belts, except oak tanned, will transmit economically a pull of 30 lbs. per inch of width. The average total load on belting should not exceed 200 to 225 lbs. per square inch of cross section of belt.

The most economical speed for belting is 4,000 to 4,500 ft. per minute, and the best distance center to center is 25 feet.

The horse power transmitted by a leather belt of 1 sq. inch cross sectional area is

$$H. P. = \frac{P V}{33,000}$$

in which P is the effective pull in the belt in pounds, and V is the velocity of the belt in feet per minute.

To ascertain the length of belt for a certain drive add the diameters of the two pulleys in feet and multiply the sum by 1.57 and add twice the distance between the centers of the shafts. The result is the number of feet of belting required.

The hair side of a belt should run next the pulley, and the thin edge of all splices and laps on the side of the belt next the pulley should point away from the pulley which it is approaching.

Leather belting responds to good care, and double belts have been known to last for 18 years when under an average load of 54 lbs. per inch of width. Every 5 to 6 months a belt should be cleaned and greased, as the grease in a new belt becomes exhausted. After cleaning there should be applied a mixture of edible beef tallow 2 lbs. and cod liver oil 1 lb. After melting the tallow and cooling a little, add the oil. This is the same grease put on the belt when new by the manufacturer. It should be put on in light coats with a camel's hair brush only as fast as absorbed. To get the surface dirt off the belt wipe it with a cloth moistened with kerosene.

Lubricating oil ruins a belt and rosin is worse. Moisture in the form of steam or water is harmful.

Leather belts will stretch 6 per cent of the original length and will require tightening within 34 hours after having been set up. A second tightening can be given 48 hours later, the third at the end of a week and the fourth in 30 days.

**RUBBER BELTING** is made of cotton duck thoroughly impregnated with rubber. Some manufacturers put out a belt made by building up a number of plies. Others make a woven belt. The manufacturers vary the thicknesses of the coating on either side to suit the work to be done by the belt. Rubber belts are cured under heavy hydraulic pressure and the stretch is taken out by the manufacturer.

For each ply of the belt the pulley should have not less than 4 inches of diameter. Like leather belting, the alinement of shafting and pulleys must be correct to avoid undue wear. In this respect belt driving differs essentially from manila rope driving, and demands the



best work of the millwright. In grain elevators, however, rubber belting is used principally in the legs to carry the buckets and for belt conveyors or grain carriers.

## Clutches and Cutouts.

The use of some form of device for cutting off the power from an individual machine or from a group of machines is desirable in all factories and plants. In the grain elevator it is practically necessary; and except for those legs, conveyors and other machines which are operated separately by individual electric motors a cutout clutch offers the most suitable means for accomplishing the purpose. Even when a machine has its own motor a clutch will frequently prove a profitable and convenient adjunct.

The jaw clutch, which is made in both square and spiral types, is a cutout that was popular some years ago, but more recently it has been largely abandoned by most engineers in favor of the friction clutch. The reasons prompting this change take into consideration the fact that the jaw clutch is less flexible than the friction clutch; that it does not lend itself so readily to varied installations; that in operation it seizes the standing machine abruptly, thus placing an undue strain on the prime mover and the driven machine; and that, after it has been once engaged it cannot be made to release easily on every occasion.

Friction clutches can be used in connection with belt pulleys, rope sheaves, chain sprockets and gears, permitting these transmission members to remain stationary when they are not required to do work. When so used one part of the clutch is keyed or otherwise fixed rigidly to the shaft and the mating portion of the clutch is fixed to the pulley, sheave or gear. The shaft passes thru the bore of the pulley, sheave or gear but is not keyed. With the clutch disengaged the portion fixed to the shaft revolves with it and the other portion, with its transmission member attached, remains stationary. Engagement of the clutch binds the whole together to cause the pulley, clutch or sheave to revolve with the shaft.

Friction clutches may also be used as cutoff couplings connecting two shafts. In an installation of this kind, one part of the clutch is keyed to the end of one shaft, while the other part is keyed to the adjacent end of the other shaft, with the point of shaft severance approximately central within the clutch mechanism. Engagement and disengagement of the clutch then serves as it does with pulleys to cause the driven shaft to revolve or to permit it to remain stationary, as the case may be.

The friction clutch consists essentially of parts that may be permitted to stand independent of each other, or that may be caused to act in unison when the friction surfaces are brought into the proper relation and there locked. Usually one surface is of metal, either cast iron or steel, smoothly and evenly formed, and the other surface is of some material having a high coefficient of friction as compared with the metal. In some clutches

this "friction" surface is of wood, in others leather or some specially prepared friction fabric.

The installation of a friction clutch will be governed by the factors surrounding the individual case. Having determined upon the type of clutch that is to be used, the size must be decided. In this, it must be kept in mind that the clutch will have to overcome an inertia load in starting, and its size should be sufficient to transmit the power that will be required under the most adverse conditions it will be called upon to encounter; but under certain circumstances it is desirable to have the clutch slip and fail to pull the load, rather than to damage an expensive machine or pull a belt in two when the machine is so hopelessly choked that it cannot operate. This condition will sometimes be found in a choked elevator leg, and some engineers advocate the use of a clutch on each leg that will slip before the danger point is reached, thus minimizing the danger of damage or fire if the buckets are held against movement by an excess accumulation of grain in the boot. A similar application of the principle is to permit the clutch to slip before the leg belt itself reaches the slipping point.

In country elevators, where a single gasoline or oil engine or motor furnishes power for the entire plant, a favorite method of installation is to run a line shaft from which to take the power for the various machines. This line shaft usually is level with the main shaft of the prime mover, and the two are connected by means of a friction clutch coupling. This is especially useful with gasoline and oil engines that are started more easily when they are free of any outside load. The line shaft, as well as any counter shafts that may be provided, may carry additional friction clutch pulleys, sheaves or sprockets for driving leg, cleaner, sheller, etc.

A friction clutch, properly installed, will make it possible to cut out the machine which it controls while the remainder of the plant may proceed without interruption, a point that is of much importance in case of a breakdown or when one or more machines are not needed in the processes under way. The factor of greater safety to employees must also be considered. Many states require that factory machines be provided with some means for cutting off the power, and some of these laws even go so far as to specify friction clutches for this purpose.

The control of a friction clutch is simple. It consists of an arrangement of toggles and levers, operated either manually or by power, for moving the friction surfaces together and for separating them. By means of suitable protective cases or screens the clutches themselves can be made safe against all risk of danger to employees, and most clutches now made are contained within a case that effectually accomplishes this purpose.

The care of a friction clutch is simpler, perhaps, than that of any other portion of the mechanical equipment. The only care required is that of keeping the clutch clean and its moving surfaces lubricated. Lubrication, of course,

does not apply to the gripping or friction surfaces, which need no care but cleanliness and an occasional examination to learn their condition. The gripping of one friction surface upon the other is brought about by the pressure applied thru the levers and toggles, and these must be kept in correct adjustment to assure maintenance of the right pressure and the right relationship between the surfaces. The adjustments required vary with different types of clutch, and all manufacturers furnish the information pertaining to their product.

Like most machines, a friction clutch may be abused; and when it is it will render less satisfactory service. After the necessity for proper care, there follows the requirement of proper use. This means, especially that the clutch should not be needlessly overloaded, and that it should not be forced to pick up the load suddenly. The latter practice not only places undue strain on the clutch itself but it severely tries the driving and driven machines as well.

To engage a friction clutch correctly the operator should first make certain that the driven machine is free to operate and that the driver is running at correct speed. The clutch lever should then be moved forward gradually, letting the gripping surfaces take hold at first lightly and then firmly and more firmly until the clutch is fully closed and the driven machine running at its rated speed. When this practice is followed clutch adjustments will be needed but infrequently and highly satisfactory service will be obtained from all members of the plant equipment.

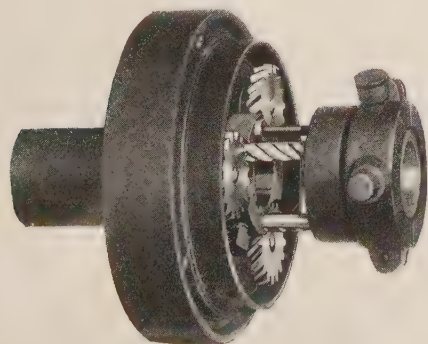
## Electrical Transmission and Control.

Electrical energy is power. It is invisible, and when its path is properly prepared it flows without giving tangible evidence of its presence, but because of its nature its transmission and control present specific problems not encountered in the use of any other form of power.

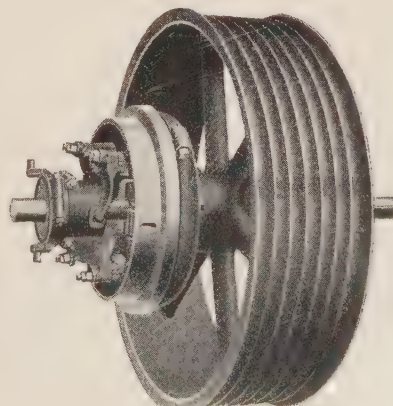
To understand some of these problems, it is necessary to reflect that all energy is in some manner derived from heat. It may be generated by the burning of coal under steam boilers or by the explosions of gas within the cylinders of an internal combustion engine, and then we can feel and sense the heat; or it may be obtained from the force exerted long previously by the sun in lifting particles of water vapor that they might accumulate above our water wheels and turn those wheels as the lower levels are sought.

Electricity, therefore, in addition to being power is also heat, or rather it possesses the qualities necessary to generate heat under certain conditions. This fact makes it necessary that the apparatus for the transmission of electrical energy be so arranged and controlled that the useful power may be obtained while objectionable manifestations of its heat making qualities are guarded against.

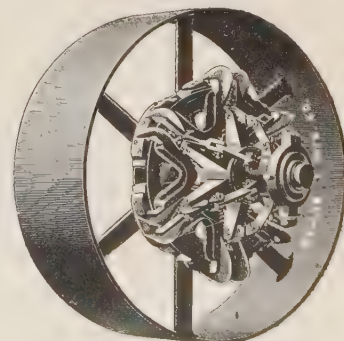
Electricity, flowing within a wire, is analogous with water flowing in a pipe. Both have pressure, communicated by the source from which they spring; and both have measurable extent or quantity, and capacity for doing



An Enclosed Friction Clutch.



Friction Clutch Attached to Rope Sheave.



Friction Clutch Attached to Belt Pulley.



work. In the case of water we express the pressure in terms of pounds per square unit of surface and the volume in gallons. Electrical pressure we term voltage, the electricity itself is current, and the volume of current is expressed in amperes. In both cases, the capacity for doing work is converted into figures representing horsepower for our purposes of comparing, selecting and applying them to our needs.

The wires which conduct electrical energy into and about a grain elevator are charged with inherent capacity to generate heat. If this is correctly controlled and properly applied it will do work. If improperly applied or controlled it may bring about destruction.

The only safe manner of wiring a grain elevator for power and lights is to run all wires in rigid iron conduit. The Electrical Code approved by insurance companies specializing in the grain elevator field requires this form of installation, and no substitute is satisfactory or wholly safe. If rigid iron conduit is not used the fire hazard is increased, and on this point there should be no compromise or quibbling.

The size of wire that will be required must be determined by a competent person, but it is not beside the point to say that no one would expect to use a 1/2-in. pipe for carrying water when the quantity needed can only be carried by a 2-inch pipe; and it is just as necessary that electricity be provided with a conducting medium of a size ample to the needs of the installation.

Having put the right size of wire within rigid iron conduit, there remains the necessity for certain accessories. Outlet boxes must be of safe and approved types; switches should be conveniently located and so constructed that there will be no danger of accident to workmen not fully acquainted with the need for caution; the proper motors and lights must be chosen; and means for controlling the motors must be provided.

Motors for grain elevator service should be of the squirrel cage induction type, operating on alternating current. It is the only motor exactly suited to all the needs of the elevator, as explained in detail on pages 796 and 797 of the Journal for May 10, 1919. Lights should be of approved type, the bulbs enclosed in straight side vapor proof globes, and, in the case of extension lights, the cords should be well insulated. These cords must be examined frequently, and when wear begins new ones should be substituted for the old.

The control of a motor in a grain elevator includes little but its starting and stopping. For the purpose of starting an induction motor, a starting compensator must be provided on all but the smallest sizes. The compensator should be equipped with under voltage release and an overload relay, the whole encased within a metal enclosure beyond which only the operating handle protrudes. For the movement of this handle three positions will be indicated. One is the "Off" position, one the "Start," and the other "Run." When the idle machinery is to be placed in motion the handle is moved from the "Off" to the "Start" position. This has the effect of giving the motor only a portion of the line voltage for the starting operation, this portion being predetermined by the manner in which the connections are made. Usually it will be 80%, sometimes only 65%, depending on the character of work the motor is being used for and the conditions surrounding starts. After the motor gets under way, the operator pushes the handle to the "Run" position and leaves it there until the work is finished. To stop the motor he pushes the handle from "Run" to "Off." This handle will not remain in the "Start" position unless held, returning promptly to the "Off" position if released. Moreover, it cannot be moved from "Off" to "Run" without going thru the "Start" position.

The under voltage release, which is quite essential, will serve to trip out the compensator switch when the voltage drops to a pre-

determined percentage below normal. The over-load relay will trip out the switch when the load placed on the motor rises to a predetermined percentage above normal. These devices protect the motor against prolonged and dangerous overloads and against the detrimental effect of a current rise after a previous fall.

The nature of electric power, especially the fact that no notice may be given of its suddenly being cut off, makes it highly desirable that machines operated by motors be provided with devices to guard against such emergencies.

Elevator legs should have back stops to hold the leg belt against reverse movement when the power fails. This may be done by fitting the motor itself with a solenoid brake, but a mechanical back stop is better. Eventually, perhaps, some device will be developed to close the gate valves leading to boots, conveyors, cleaners, shellers, grinders and other machines in case of power failure, but these machines do not require protection so much as the leg, where a choke may mean great expense and trouble and perhaps even danger.

### Freight Movement Better Than Year Ago.

The number of freight cars loaded with revenue freight during the week ended Feb. 25 was 735,286. This compares with 780,924 cars in the previous week, and shows a reduction of 45,638 cars, much of which was due to the observance of Washington's Birthday. However, the week of 1920 which corresponds with that ended Feb. 25 was exceeded by the figures of this year by 75,644 cars.

The loading of grain and grain products this year was 46,729 cars, which was 7,480 less than the previous week, but 5,597 more than in the corresponding week last year.

Idle freight cars on Feb. 23 totaled 437,678, compared with 449,819 on Feb. 15, a reduction of 12,141 cars. Of the surplus cars, 264,814 were in good repair and ready for immediate service if traffic demands warranted, while the remaining 172,864 were in need of repairs.

FORTY-SEVEN car loads of grain products were shipped in one week recently from Minneapolis to the Atlantic Seaboard for Russian Relief.

### Fluctuations in the Price of Chicago Board of Trade Memberships.

The price of membership in the Chicago Board of Trade sank to the very lowest level for many years in 1907, in that year of general business depression and financial stringency, when the Chicago banks were issuing clearing house certificates in lieu of real money. This low price of \$1,800 appears on the chart herewith in the column 1907.

Several years later the price sank to a correspondingly low level, but was pegged at \$2,000, the directors of the Board having adopted the policy of buying and retiring memberships. Otherwise the quotation might have dropped to perhaps \$1,500.

The war brought a boom in all business in which the grain trade shared. With commissions on cash grain based on a percentage of the sales price, as the commission rule was amended, the earnings of the Board members greatly increased. When wheat was valued at \$3.50 the commission on the sale of single carloads often amounted to more than \$50. Memberships soared in 1919 to \$11,200, the highest price on record.

The beginning of 1922 has witnessed a great increase in the volume of trade in the speculative pits, and memberships are again in good demand so that higher prices are expected for the certificates.

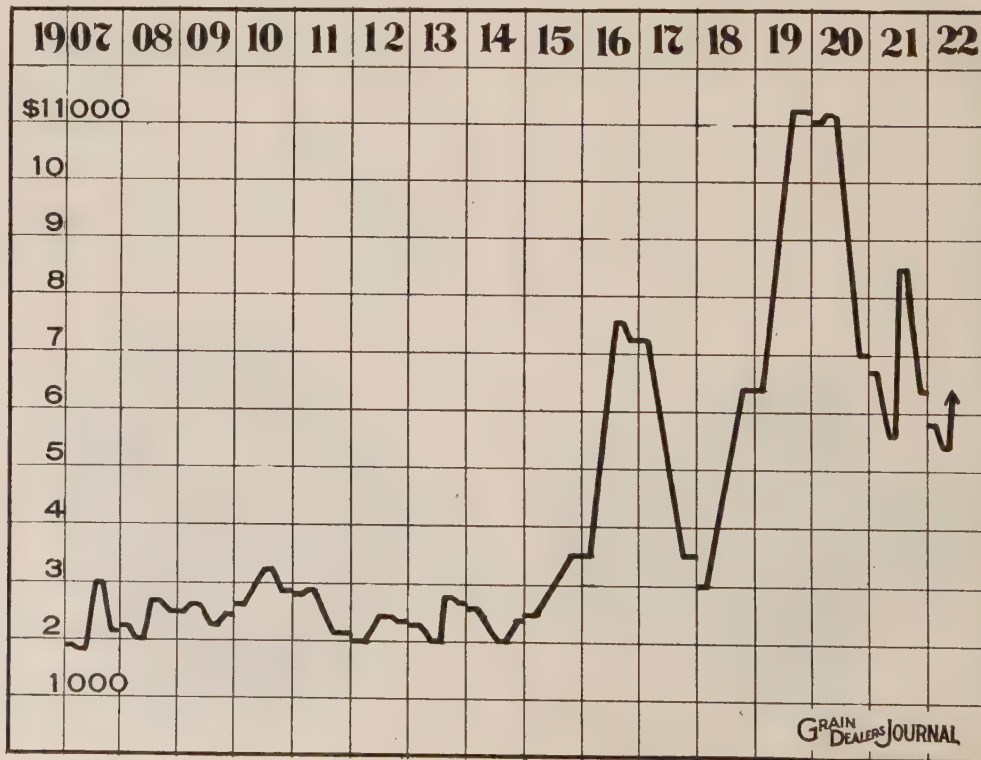
### General Crop Summary.

The general crop summary, issued by the Bureau of Markets and Crop Estimates Mar. 6 shows that plowing and preparations of soil for corn planting is in progress in several states.

The condition of winter wheat in Kansas has been improved by increased supply of moisture although growth has been retarded by cold. Lack of moisture has resulted in poor condition of the crop in parts of Nebraska, Colorado and New Mexico. Some damage from alternate freezing and thawing in Illinois, Indiana and Ohio. Condition favorable in central Iowa, Georgia, North Carolina and Virginia.

The condition of rye in the central states is favorable. In eastern Colorado it is below normal, and injury from ice covering is feared in southern Wisconsin.

Prices of Chicago Board Memberships for Fifteen Years.





# Grain Trade News

Reports of new firms, changes, deaths, casualties and failures; new elevators, improvements, fires and accidents are welcome. Let us hear from you.

## ARKANSAS

Bard, Ark.—A warehouse belonging to the House-Jones Grain Co., Paragould, burned with a loss of \$2,500, no insurance.

## CALIFORNIA

Lamanda Park, Cal.—The Ambler Grain Co. is now operating the California Milling Co. at Los Angeles in addition to its plant here.

Los Angeles, Cal.—The Ambler Grain Co. is operating the California Milling Co. here in addition to its plant at Lamanda Park.

Los Angeles, Cal.—The Atlas Milling Co. will hereafter do business only in carlots. The company remodeled its building and divided it into several stores, reserving space enough for the company's office, and discontinuing l. c. l. business.

## CANADA

Brownlee, Sask.—An elvtr. here burned Feb. 13 with a loss of \$10,000.

Regina, Sask.—A. D. Miller, well known in the grain trade of western Canada, died recently.

Gillespie, Sask.—J. H. Ross, mgr. of the Alberta-Pacific Grain Co., died recently in a hospital at Vancouver.

North Battlefield, Sask.—When his clothes caught in the flywheel of a gas engine, Archie Dale, an employee of the Western Flour Mills, was whirled to death. It is believed he suffered a heart attack and fell into the machinery.

Port Arthur, Ont.—The contract for the erection of a 1,500,000-bu. annex to the elvtr. of James Richardson & Son, has been let to a Minneapolis company. Work will begin in the spring. The capacity of the elvtr. when complete, with the old house, will be 3,500,000-bus.

Winnipeg, Man.—The 4th annual report of the United Grain Growers, Ltd., has been made public. It shows that, during the fiscal year, elvtrs. were built in Alberta, at Carbon, Consort, Munson and Lougheed; and one in Manitoba, at Cracknell Siding. Three of the elvtrs. built in Alberta were to replace elvtrs. burned. In addition, 3 elvtrs. which were in the process of building in the previous year were completed. The company's fiscal year ends Aug. 31, and the report shows capital assets having a book value of \$3,539,055.18.

## COLORADO

Denver, Colo.—Horace Geselin, former mgr. of the Scott George Grain Co. has left for Portland, Ore., where he intends to locate permanently.

Denver, Colo.—The property of the S. B. Ashcraft Grain Co. at Amen (Logan p. o.), Willard and Merino will be sold by auction by trustee in bankruptcy, Mar. 14, at Sterling.

Paoli, Colo.—The Paoli Farmers Co-op. Elvtr. Co. has completed its new 25,000-bu. elvtr. and new office. Equipment is 15 h. p. "Y," F-M engine, 10-ton Fairbanks truck scale, 6-bu. Richardson Automatic Scale, truck and wagon dump, Eureka cleaner, manlift. W. C. Bailey did the work.

Towner, Colo.—M. J. Wagey, Yuma, has completed a new 15,000-bu. cribbed, iron clad elvtr. Equipment is as follows, 10-h.p. F-M engine, 10-ton scale, 5-bu. Richardson Automatic Scale, manlift, truck dump, Hall Distributor and Buckets and rope drive. W. C. Bailey did the work.

Cheyenne Wells, Colo.—The Summit Grain & Coal Co., Denver, has completed a new 20,000-bu. iron clad elvtr. Equipment is as follows, 10-ton scale, 6-bu. Richardson Automatic Scale, truck and wagon dump, manlift, Hall Distributor and Buckets, Kewanee Flexible Spout and three F-M Motors. W. C. Bailey did the work.

Denver, Colo.—J. D. Best Co. has failed.

Ft. Morgan, Colo.—The Farmers Platte Valley Milling & Elvtr. Co. with headquarters here, is now managed by J. F. Hughes of Colorado Springs. He succeeds Geo. E. Dodge.

Denver, Colo.—J. H. Bailey has opened an office in the Cooper Bldg. to conduct a wholesale grain and flour business. He was recently with the Peerless Flour Mills of Norton, Kan.

## IDAHO

Soda Springs, Ida.—The Brown Bros. Grain & Warehouse Co. has discontinued business. Our new name is Idaho Grain Co., here and at Montpelier, with headquarters here. O. H. Brown is mgr.—Idaho Grain Co.

## ILLINOIS

Lensburg, Ill.—The Co-op. Grain Co. has installed an electric motor.

El Paso, Ill.—Ten business men are said to be contemplating building a new elvtr. here.

Danville, Ill.—The Farmers Co-op. Elvtr. Co. is being organized by farmers in this vicinity.

LaSalle, Ill.—Geo. L. Blanchard, formerly in the grain business here, died at Washington, D. C., at the age of 81.

Bulpitt (Kincaid p. o.), Ill.—Charles McCleRick, new mgr. of the Farmers Grain Co., has moved from Edinburg to this place.

Chestnut, Ill.—H. M. Morris will be the mgr. of the Farmers Grain Co. here. He comes from Lodge, where he managed the Farmers Grain Co.

Proctor (Foosland p. o.), Ill.—The engine house of the elvtr. of Geo. A. DeLong burned recently. Fully insured, damages amounted to \$500.

Randolph, Ill.—The Randolph Co-op. Grain Co. is building coal sheds and will handle coal, salt, twine and oil in addition to grain in the future.

Ontarioville, Ill.—Wm. A. Fenz, who recently traded his elvtr. business to Herman Hattendorf for a farm, has sold the farm to Fred Hattendorf.

Griggsville, Ill.—At the annual meeting of the Griggsville Farmers Elvtr. Co., plans for putting up an elvtr., coal sheds and warehouse were discussed.

Lodge (Monticello p. o.), Ill.—H. M. Morris, mgr. of the Farmers Grain Co., has resigned and will go to Chestnut to manage the Farmers Grain Co. there.

Alvin, Ill.—I am back in the grain business, having taken over the Alvin Grain & Electric Co.'s elvtr. Feb. 26. I was formerly at Ross-ville.—Geo. L. Merritt.

Whitehall, Ill.—R. A. Mansfield, formerly mgr. of the V. C. Elmore Elvtr. at Roodhouse, is the new mgr. of the Whitehall Co-op. Mill & Elvtr. Co. He succeeds Robt. Hicks.

Ottawa, Ill.—Fire, supposed to have originated from the sparks of a passing train, started in the elvtr. of F. B. Kenny but was extinguished, causing only a small loss.

Sidell, Ill.—R. G. Herron, mgr. of the Sidell Farmers Elvtr. Co., and Elmer S. Skinner, also employed at the elvtr., resigned their positions. Both have agreed to stay with the company until a new mgr. is employed.

Belleville, Ill.—While about to enter his automobile, Geo. W. Leinesch, secy. of the Belleville Co-op. Grain Co., fell dead, from cerebral hemorrhage. He was 57 years old. His wife, two sons and two daughters survive him.

Stockdale, Ill.—The elvtr. of Geo. H. Weitz burned Feb. 19, together with 10,000 to 15,000 bus. of corn contained in it. Loss amounted to \$20,000, practically all covered by insurance. Mr. Weitz states the elvtr. will probably be rebuilt.

McHenry, Ill.—The Burrell Eng. & Constr. Co. has been awarded contract for a cleaning and transfer house for the McHenry Flour Mills.

Hillview, Ill.—The fire which destroyed the elvtr. of V. C. Elmore is believed to have started in the chute connecting the elvtr. with the cob burner. The chute is thought to have become clogged with cobs and dust. Loss to the company amounted to \$20,000.

Ottawa, Ill.—Frank J. Lindsay is the new mgr. of the South Ottawa Grain & Supply Co., succeeding Wilbur Lawrence. Mr. Lindsay's home is at Grand Ridge, where he formerly operated an elvtr. but for the past two years he has been in the elvtr. business at Chicago.

Jerseyville, Ill.—H. S. Daniels has severed his connection with the firm of Daniels & Neeley, selling his interest in the firm to his partner, H. G. Neeley, who will continue it. Ten months ago, Mr. Daniels was injured at the elvtr. and since that time he has sustained a physical breakdown, and as a result of physicians' advice, has decided to rest for a time, before again engaging in business.

Mason City, Ill.—A verdict of "not guilty" was returned by a jury Mar. 2, in the case of Jacob Zimmerman, complainant, against James A. McCreery & Sons, defendants, members of the Peoria Board of Trade. Zimmerman brought criminal suit against the company under the gambling act, seeking recovery of three times the losses it is alleged he sustained on future trades executed by James A. McCreery & Sons on the Chicago Board of Trade. Under the state law, the loser may recover three times his losses if a verdict of guilty is returned. Zimmerman sought damages of \$15,150 for losses sustained in the early part of 1920. The jury was out but a short time, when the verdict was rendered. The attorneys for J. A. McCreery & Sons were Henry Child, Springfield, W. A. Covey, Mason City, and Ed Mahwitz, Havana.

## CHICAGO NOTES.

The rate of interest for advances on Bs/L has been continued at 6 per cent per annum for March by the finance com'te of the Board of Trade.

John C. Shaffer of the J. C. Shaffer Grain Co. has been decorated by the French government with the Legion of Honor, for his services to humanity.

Faroll Bros. have incorporated, capital, 2000 shares of no par value. Incorporators are Barnett Faroll, Joseph Faroll and Benjamin F. Schwartz.

Harry D. Gibbons was suspended indefinitely from the Board of Trade by the directors when he failed to appear before them after being summoned several times.

A. E. Bryant of Bryant, Isard & Co., Toronto, Can., was suspended from the Board of Trade for failing to appear for an investigation when summoned. His company went into bankruptcy Mar. 3.

E. D. Dier of E. D. Dier & Co., which failed recently, has been expelled from the Board of Trade. The company was charged with bucketing stock and grain trades, only one or two small lots of grain having been thus handled.

John Hill, Jr., sec'y of the Creditors' Com'te, appointed to settle the affairs of E. W. Wagner & Co., has issued a statement urging creditors to hasten their acceptance of the com'te's services, if they intend doing so, by filling out proper forms to be verified before a notary public.

The American Malting Co. has sold its 500,000-bu. grain storage plant at Kensington, to the J. Rosenbaum Grain Co., which will immediately overhaul the working house and enlarge the handling facilities. The steel and the concrete tanks will be put in prime condition to store grain.

New members of the Board of Trade are Jas. T. Munds, Potter L. Smith, Edw. Tilden, Chas. V. Esseager, Henry B. Smith, Paul Heyman, Alfred G. Kay, C. H. McCarty, C. G. Ellis, Benj. F. Stein, S. F. Mayer, and Edw. T. White. Those transferred are John H. Holden, Jas. B. Forgan, Benj. S. Armstrong, Jos. A. Rushton, Frank S. Gresham, H. A. Ladish, Harley McCardel, H. R. McLaughlin, H. P. Rogers, Julian G. Cates, H. S. Newell, Gerald Eberberger, T. G. McCarthy, A. F. Weinberger, J. B. Swearingen, M. K. Betts, Edgar Gifford and Paul Tietgens. A membership sold recently at \$7,450 net to buyer, an increase over recent sales.



Frank E. Webb of Detroit has been expelled by the directors of the Board of Trade. Some time ago Mr. Webb was suspended for failure to appear before the investigating committee.

## INDIANA

Portland, Ind.—The Haynes Mfg. Co. issued \$30,000 of preferred stock.

Indianapolis, Ind.—New member of the Board of Trade is Chas. W. Weirick.

Clark's Hill, Ind.—Geo. Winger of the Clover Leaf Elvtr. here is recovering from a recent illness.

Windfall, Ind.—A. D. Doggett is the new mgr. of the Farmers Grain Elvtr. Co. here, succeeding Ira Kidwell.

Geneva, Ind.—Nathan Shepherd and son, Clarence, have purchased the elvtr. of Berne Grain & Hay Co., Berne. The property includes an elvtr. and coal yard.

West Brooklyn, Ind.—At the next meeting of the Farmers Elvtr. Co. a new mgr. will be elected. Emil Vinet is acting as mgr. at present, succeeding R. E. Jacobs.

Rich Valley, Ind.—A. J. Quick, mgr. of the Farmers Co-op. Elvtr. Co., died Feb. 20, as a result of a short illness from scarlet fever. His wife and two children survive him.

South Milford, Ind.—Vern McCullick has resigned from the employ of the Home Grain Co. and has gone to Wolcottville where he is employed by the City Mfg. Co. Harry Spice succeeded him there.

Berne, Ind.—The Berne Grain & Hay Co., having disposed of its elvtr. at Geneva to Nathan Shepherd and son, will concentrate on the local business, being the only elvtr. the company now operates.

Lafayette, Ind.—The Farmers Co-op. Grain Elvtr. Co. has bot the elvtr. of Born & Co. for \$15,000. The elvtr. includes a corn drier. Possession was given Mar. 1 and the new company started active business that date.

Stone Station (Winchester p. o.), Ind.—Dales Bros. have bot the elvtr. of the Stafford Grain Co. here, and possession was given Mar. 1. Robt. A. Dales, Sheridan, and Homer Dales, Lebanon, are the partners of the firm. They will handle coal and feed also.

Raub, Ind.—Judge Berry rendered no decision in the suit of the Savers Grain Co., Chicago, against the Raub Grain Co. After hearing the evidence, he took the case under advisement until the March term. The case involves about \$38,000 in notes, which are alleged to have been made by Lee Kelly when he was mgr. of the Raub Grain Co.

Evansville, Ind.—Charles Burnett, referee in bankruptcy, was here recently to adjust claims of the creditors of the defunct Akin-Erskine Mfg. Co. A month ago Mr. Burnett ruled that 35 cents on the dollar must be paid, and it is said claims run into many thousands of dollars. Wilbur Erskine, pres. of the company, states he is prepared to pay all claims on the basis fixed by Mr. Burnett.

## IOWA

Searsboro, Ia.—The elvtr. of G. G. Bowen is being wrecked. He will rebuild at once.

Churdan, Ia.—G. W. Ruth has succeeded G. W. Evans as mgr. of the Farmers Elvtr. Co.

Dedham, Ia.—The Farmers Grain, Stock & Lbr. Co. has bought the business of the Bourse Grain Co.

Denison, Ia.—At the annual meeting of the Farmers Union Exchange, John Ebnen was elected mgr.

Humboldt, Ia.—W. J. Brown, mgr. of the Farmers Co-op. Ass'n, has tendered his resignation, to take effect April 1.

Sioux City, Ia.—Frank H. Schroeder, formerly with the J. J. Mullaney Co., is now with the Terminal Grain Corp. here, in the cash grain department.

Frimghar, Ia.—The elvtr. of C. E. Propps burned Mar. 3, together with one and one-half cars of corn and barley. Fire was discovered in the cupola.

Carnarvon, Ia.—Mail addressed to the Wentz Grain Co., reported to have taken over the elvtr. of Frank & Stoelk, is returned marked "unclaimed."

Hamburg, Ia.—The elvtr. of the Farmers Elvtr. Co. which burned recently, will be replaced with a corn handling elvtr. Electric power will be used.

Glidden, Ia.—By a vote of 41 to 8, the stockholders of the Glidden Farmers Elvtr. Co. decided to change from a stock company to a co-operative company.

Highview (Webster City p. o.), Ia.—N. F. Christenson, who has charge of the Farmers Elvtr. Co. has moved his family here and will make this place his home.

Des Moines, Ia.—The annual convention of the Western Grain Dealers Ass'n will be held at the Fort Des Moines Hotel here, April 11 and 12.—Geo. A. Wells, sec'y.

Galva, Ia.—Frank Lichtenberg is now agent for J. B. Adams here, succeeding L. H. Adams, who has started in business for himself at Lake City.—L. H. Adams & Co.

Corwith, Ia.—John Jakle, mgr. of the Corwith Co-op. Grain Co., resigned Mar. 1. He has interests in Illinois which require his personal attention.—Corwith Co-op. Grain Co.

Lake View, Ia.—The Simmons Pop Corn Co. closed its elvtr. recently until the board of directors can straighten out its present financial condition, and place the company on a sound basis.

Bingham (Shenandoah p. o.), Ia.—J. Auracher, whose elvtr. narrowly escaped destruction thru fire recently from backfire of a gas engine, will install an electric motor to prevent a recurrence of the accident.

Lake City, Ia.—L. H. Adams & Co. purchased the elvtr., coal sheds, etc. from the Farmers Elvtr. Co. Feb. 4 and started business at once. L. H. Adams was formerly agent for J. B. Adams at Galva.—L. H. Adams & Co.

Des Moines, Ia.—The statement that Miss Flossie Eaton, of Boone, is the only woman elvtr. operator in this section is incorrect, as Miss Edith Akers is mgr. of the Farmers Elvtr. Co. at Ogden and has been for three years.—Central Iowa Grain Co., E. H. Day.

Sac City, Ia.—W. M. Bell Co., Milwaukee, have opened a branch office here with Frank Bell in charge. It is expected that Geo. O. Strom will take charge of the office soon. He was formerly a grain dealer at Schaller, and more recently has been representative of W. M. Bell Co. at Worthington, Minn.

Green Mountain, Ia.—Settlement of a claim made by Mrs. L. E. Patterson against the Farmers Elvtr. Co. and the Aetna Life Ins. Co., for the death of her father, C. M. Lyons, was approved in the district court. Mrs. Patterson will receive \$500 under the provisions of the Iowa workmen's compensation act. Mr. Lyons was killed while in the employ of the elvtr. company.

## KANSAS

Atchison, Kan.—Dilts & Morgan closed their office here Mar. 4.

Strickler (Byers p. o.), Kan.—The Farmers Elvtr. Co. incorporated. Capital stock \$10,000.

Studley, Kan.—F. D. Walter will build a new elvtr. to replace the one burned early this year.

Dodge City, Kan.—The Dodge City Co-op. Exchange will increase its capital stock of \$20,000 to \$40,000.

Olivet, Kan.—E. H. Elmore, formerly prop. of the Olivet Elvtr. & Lbr. Co., is now residing in Los Angeles.

Andover, Kan.—The Kansas Milling Co., Wichita, has purchased the elvtr. here of Otto Weiss Mfg. Co.

Greenwich, Kan.—The Kansas Milling Co., Wichita, has purchased the elvtr. here of Otto Weiss Mfg. Co.

Sherwin Junction, Kan.—The Farmers Union Co-op. Elvtr. & Supply Co. incorporated. Capital stock \$15,000.

Wichita, Kan.—The 25th annual meeting of the Kansas Grain Dealers Ass'n will be held here May 16, 17 and 18.

Sawyer, Kan.—The Farmers Equity Elvtr. Co. expects to make \$4,000 worth of improvements on their elvtr. this spring.

Wichita, Kan.—The Miller Grain Co. has filed a voluntary petition in bankruptcy, listing assets at \$13,246 and liabilities at \$28,001.

Clifton, Kan.—J. A. Strober, formerly with the Vining Grain Co., is now the office man of J. P. Coates, who recently opened the elvtr. here.

Hutchinson, Kan.—P. M. Clark of the New Era Milling Co. of Arkansas City is a new member of the Board of Trade. He will open an office here.

Dodge City, Kan.—The Hillyer Grain Co. is no longer in business here.—J. H. Hillyer.

Meriden, Kan.—Reports have it that two different men are figuring on erecting a new elvtr. here, and it is pretty sure that one will go thru with the project.

Topeka, Kan.—C. L. Parker, sec'y and treas. of the Derby Grain Co., who has been confined at his home thru illness, is convalescing and will be back on the job within a week.

Topeka, Kan.—Arthur H. Dillon, sec'y and gen. mgr. of the Kaw Mfg. Co., resigned Mar. 1. He was formerly treas. but became gen. mgr. when John B. Nicholson resigned to enter business in Kansas City.

Emmett, Kan.—Tom White, of St. Mary, who bot our grain business last June, has completed a new elvtr. and is now open for business. We are no longer in the grain business.—Emmett Farmers Union Hardware Co., V. C. Gillgannon, mgr.

Lebanon, Kan.—H. C. Rice, who was engaged in the grain business at Wichita, has sold his membership in the Board of Trade there, and will associate himself with C. M. Isom here. Mr. Isom is sec'y, treas. and mgr. of the Lebanon Mill & Elvtr. Co.

Atchison, Kan.—North Kansas City and St. Joseph, Mo., are trying to induce the Blair Milling Co. to locate in their cities, but the company states its plans are undecided. At present they are remodeling the 400-bbl. capacity unit of the mill which was not damaged, and expect to be operating within a month. Sprout, Waldron & Co. are doing the work.

Muscotah, Kan.—I\* will rebuild my elvtr. which burned Feb. 12. The new house will be iron clad, 15,000-bu. capacity, with electric power. Will be equipped with two sets of legs complete, one corn sheller, one cleaner, one Fairbanks 4-bu. Automatic Scale, one feed grinder, one manlift and Hall Distributors. Expect to have the new house ready for operation by June 20, 1922.—Mrs. T. B. Kelley, per Ed. Osterbout, mgr.

Topeka, Kan.—The following have applied for membership in the Kansas Grain Dealers Ass'n, since the first of the year: Miller-McConnel Grain Co., Kansas City; Hitt & Reeves, Doniphan; Harkreader Grain Co., Arcadia; Gaylord Farmers Union Co-op. Ass'n, Gaylord; Griswold-Shaft Hay & Grain Co., Wichita; Farmers Co-op. Business Ass'n, Corwin; Smith-McLinden Grain Co., Wichita; Wenzel Grain Co., Wichita; Farmers Co-op. Grain Co., Caldwell; O. K. Co-op. Grain & Merc. Co., Kiowa; and Vance Grain Co., Kiowa.—E. J. Smiley, sec'y, Kansas Grain Dealers Ass'n.

## KENTUCKY

Bradfordville, Ky.—Our elvtr. which burned recently contained 7,000 bus. of grain and is a total loss. Loss, \$11,500. Insurance on grain was \$9,000 and elvtr. \$5,000. We had been running the machinery and failed to open windows in the cupola, and an overheated bearing caused a dust explosion. We will build a warehouse on the same foundation, using same conveyor we had before the fire to connect it with our mill. Will buy new scales, 10-ton 22 foot platform, and a receiving separator.—Bateman Milling Co.

## MARYLAND

Dickerson, Md.—The Liberty Milling Co. has purchased the grain business of Mercer & Jones here and will conduct the business in connection with its other business at Germantown.

## MICHIGAN

Coldwater, Mich.—The Coombs Mfg. Co. has filed a petition in bankruptcy. Claims of \$400,000 are said to be outstanding.

Milo, Mich.—E. M. Stephens, 62 years of age, died at his home recently. He formerly operated elvtrs. at Doster, Richland and Bellevue.

Pontiac, Mich.—The elvtr. of C. E. DePuy & Co. burned Mar. 3 with a loss of \$40,000. The elvtr. contained 13 carloads of grain, beans and seeds. Insurance partly covered the loss.—R. M. F.

Port Huron, Mich.—R. G. Pearse and H. D. Jeffords have severed their connections with the Port Huron Grain Co. and have formed the firm of Huron Grain & Beap Co. with offices in the Beckett Bldg.



Lambs, Mich.—The plans for the consolidation of the Farm Bureau Elvtr. and the Farmers Elvtr. Co. are practically complete.

Marine City, Mich.—The Marine City Farmers Co-op. Elvtr. Ass'n has an option on a local elvtr. They do not contemplate building or enlarging plant, which is 12,000-bu. capacity with two hay sheds in connection.—J. Volker.

Ewen, Mich.—We are anxious to have a good company locate here and build a warehouse to buy up farm products. This is a growing farming community and a good company would make a success.—Henry Hankin, sec'y Ewen Development Ass'n.

Marine City, Mich.—I did not take over the elvtr. of the New Haven Elvtr. Co. at New Haven as reported some time ago, but I did buy their elvtr. here. The New Haven Farmers Elvtr. Co. took over the elvtr. at New Haven. I am about to complete a deal whereby the Marine City Co-op. Elvtr. Co. will buy my plant. I still operate my plant at New Baltimore.—Jay Baldwin.

## MINNESOTA

Ersline, Minn.—Mail addressed to Jake Gull has been returned marked "unclaimed."

Huntley, Minn.—The Huntley Elvtr. Co. has incorporated with a capital stock of \$20,000.

Montrose, Minn.—McAlpin & Elsenpeter have taken over the elvtr. of the Cargill Elvtr. Co. here.

Adams, Minn.—Farmers here have organized a co-operative elvtr. ass'n. Wm. Meehan is sec'y.

Waterford (Northfield p. o.), Minn.—Mail addressed to G. F. Davidson is returned marked "removed."

Duluth, Minn.—Logan & Bryan of Chicago have been admitted to corporate membership on the Board of Trade.

Badger, Minn.—The elvtr. of the Red Lake Falls Mfg. Co. burned Feb. 17. The elvtr. contained a large amount of grain.

LaPorte, Minn.—Mail addressed to M. Wurst has been returned marked "not here." It was reported some time ago that he would build an elvtr. here.

St. Paul, Minn.—The elvtr. of the Wayne Elvtr. Co. burned recently with a loss of 9,000 bus. of grain. Loss estimated at \$50,000. Lightning was responsible for the fire.

Wall Lake (Fergus Falls p. o.), Minn.—A receiver has been appointed for the Aurdal Grain & Warehouse Assn, which operated an elvtr. here some years ago. The ass'n disposed of its elvtr. and went out of business, but there are still some debts to be settled.

Minneapolis, Minn.—The Kalispell Flour Mills Co. incorporated with a capital of \$400,000 and a \$400,000 debt limit. Incorporators are James F. Bell, pres., John Crosby and F. J. Atkinson, vice-presidents, J. W. Sherwood, treas., and W. G. Crocker, sec'y. The company has authority to establish business at any points in North Dakota, Montana and Washington.

## MISSOURI

St. Louis, Mo.—C. H. Williamson of C. H. Williamson & Co. has applied for membership in the Merchants Exchange.

Eureka, Mo.—The Eureka Co-op. Elvtr. & Warehouse Ass'n chartered with a capital stock of \$50,000. Frank Mottert is pres.

Fredericktown, Mo.—M. E. Blanton died Feb. 26 of heart disease. For many years he was mgr. of the Fredericktown Mfg. Co.

Wakenda, Mo.—The stockholders of the Wakenda Elvtr. Co. elected E. D. Huddleston mgr. of the elvtr. at a recent meeting.

Merwin, Mo.—Ill health caused H. B. Owen, proprietor of the elvtr. here, to commit suicide by hanging himself in the elvtr. Feb. 22.

St. Joseph, Mo.—Operation of the Burlington Public Elvtr. was continued Feb. 28, the house now being ready for continuous operation.

Montrose, Mo.—The Montrose Farmers Co-op. Ass'n is moving an old hay barn, which, standing about 50 ft. north of the elvtr., had been a fire menace.

St. Joseph, Mo.—We are indebted to Sec'y N. K. Thomas of the Grain Exchange for a copy of the Annual Report of the Grain Exchange for 1921. The booklet contains much valuable and interesting data, covering 15 pages.

Otterville, Mo.—The Farmers Elvtr. Co. is reorganizing with a capital stock of \$20,000.

Cameron, Mo.—The Cameron Co-op. Elvtr. Co. which took over the DeShon Feed & Fuel business last year, has let contract for a 12,000-bu. concrete elvtr. and also for a large concrete warehouse to replace the present building. The grain was handled last year without an elvtr. and it is expected that with the new facilities complete, the company will do much more business.

St. Louis, Mo.—A cut in the minimum brokerage charge by members of the Merchants Exchange will be voted at a special election Mar. 10. The proposed rule provides that when a member of the Exchange acts as a broker for St. Louis firms and on St. Louis inspection, the minimum brokerage charge for the purchase or sale of wheat, rye, corn, oats or barley shall be one-fourth cent per bushel. The present rule provides that the minimum charge on wheat, rye or barley shall be one-half cent per bushel while corn and oats shall be three-eighths cent per bushel.

## KANSAS CITY LETTER.

Louis Hoebel, 79 years old, father of Fred W. and Edwin C. Hoebel, of the Hoebel Grain Co., died recently.

The new plant of the Corn Products Refining Co. started grinding corn Mar. 6. Its capacity is 15,000 bus. daily.

C. M. Winton, cashier and general office man for B. C. Christopher & Co., died from pneumonia, after having been with the company 15 years.

W. F. Corbin, mgr. of the coarse grain department of B. C. Christopher & Co., has recovered from an operation and is again on duty at the Board of Trade.

A com'te from the Board of Trade, headed by Fred Lake, will meet with directors of the Grain Clearing Company to discuss the organization of a grain trade credit bureau, similar to those now used at St. Louis and Minneapolis.

We are indebted to Sec'y E. D. Bigelow of the Board of Trade for a copy of the Annual Statistical Report for 1921. The pamphlet has 48 pages of valuable and interesting facts regarding activities of the Board of Trade for the past year.

The Nye & Jenks Grain Co. of Omaha and Chicago, has taken over the Barnes-Piazek Co. Frank C. Blodgett of Minneapolis will be the new mgr., and the Board of Trade membership of Geo. M. Vogt, owned by the Barnes-Piazek Co. will be transferred to him.

Edwin D. Fisher, pres. of the E. D. Fisher Commission Co., died Feb. 26 at the age of 80. He left an estate of \$200,000. He was one of the oldest grain men on the Board of Trade, being a charter member. J. E. Rahm and J. J. Kraetli will continue the business of the E. D. Fisher Commission Co.

Frederick T. Fisher, sec'y and treas. of the Corn Products Refining Co., New York, has applied for membership in the Board of Trade on a transfer from E. O. Moffatt, pres. of the Moffatt Grain Co. Mr. Moffatt is retiring from active business and the company will continue under the supervision of J. E. McElvain, sec'y, with Mr. Moffatt in an advisory capacity.

## MONTANA

Musselshell, Mont.—Some time ago the Equity built an elvtr. here and the debt now amounts to about \$12,000. At a recent meeting of farmers I was appointed on a com'te to arrange a way to get money to clear up the debt, but so far have had no success. That is the only connection I have with elvtr. and I know nothing of buying or building an elvtr. here, as we now have three.—J. J. McFaul. (It was reported recently that Mr. McFaul and others were interested in a proposed farmers organization to buy or build an elvtr. here.)

## NEBRASKA

Holdrege, Neb.—C. E. Johnson & Sons have bot the Bodman-McConaughy Grain Co.'s elvtr.

Murray, Neb.—Albert Gansmere is the mgr. of the Farmers Elvtr. Co., succeeding T. S. Barrow.

Cozad, Neb.—The name of the company that took over my elvtr. Mar. 1 is the Cozad Elvtr. Co. W. A. Cole is mgr. and owner.—W. G. Adams.

Omaha, Neb.—Charles P. Moriarty, pres. of the Moriarty Grain Co., and a member of the Grain Exchange, died Mar. 3. A young son survives him.

Pauline, Neb.—At a recent meeting of the Farmers Union, Mr. and Mrs. W. H. Parks were elected to manage the elvtr. for 1922. They succeed O. G. Evans.

Johnson, Neb.—K. B. Hall, formerly mgr. of the Farmers Elvtr. Co. at Liberty, has been elected mgr. of the Johnson Grain Co. here, succeeding R. A. Dunn.

Liberty, Neb.—K. B. Hall, formerly mgr. of the Farmers Elvtr. Co. here, has gone to Johnson where he will be mgr. of the Johnson Grain Co., succeeding R. A. Dunn.

Omaha, Neb.—The board of directors of the Grain Exchange determined that the rate of interest to be charged on all advances made on and after Mar. 1, should be 7%.

Kearney, Neb.—The report to the effect that facilities for handling grain at Kearney are to be enlarged, lacks confirmation, and don't think there is anything in it. Are well supplied at present.—J. P. Gibbons Grain Co.

Doane (Benkelman p. o.), Neb.—O. M. Kellogg Grain Co., Denver, has completed a 10,000-bu. studded, iron clad elvtr. Equipment is gas engine, 6-ton dump scale, hopper scale and wagon dump. W. C. Bailey did the work.

Tecumseh, Neb.—Stockholders of the Farmers Union Co-op. Ass'n at a recent meeting voted to dissolve. The elvtr. will be sold at public auction within 30 days. Reason for dissolving is that the business has not paid.

Elkhorn, Neb.—The Blackburn Mfg. Co. has bot the mill formerly owned by the Udpkie Mfg. Co. The firm consists of N. C. Blackburn and his two sons, E. H. and G. F. Blackburn. G. F. Blackburn will operate the mill, while the other two establish headquarters for the mill's output in Omaha.

Omaha, Neb.—On Feb. 28 the directors of the Grain Exchange adopted the following amendment to the rules: Sec. 20. If it shall be brought to the attention of the Board of Directors that any member has an unsatisfied balance in favor of a country shipper, which is due and payable, the member so charged shall be denied the privileges of membership until the account is satisfied. In this instance, the procedure as set forth in sections 7 and 10 of this article shall not apply.

Lincoln, Neb.—A letter recently sent to all grain buyers and elvtr. operators in Nebraska by Leo Stuhr, sec'y of the division of weights and measures of the state department of agriculture for testing and inspection, reads as follows: "In view of the fact that complaints have been received by the department relative to the inaccuracy of the test buckets employed by the country buyers of grain, it is deemed advisable that these devices be tested during this period for the reason that grain shipments are not as extensive at this time as they will be at a later date. As it was the sentiment of the elvtr. men in convention that the department equip a proper laboratory to test such devices, arrangements have been made thru the division of weights and measures that this work may be done. The fee for testing these buckets will be fifty cents each, provided they are sealed, the owner to pay the shipping charges both ways." The letter also suggests that all buckets be sent in prior to May 1, and also emphasizes the fact that buckets cannot be tested in the field, but must be sent to Lincoln.

## NEVADA

Minden, Nev.—Mail addressed to the Consolidated Warehouse Co. has been returned marked "undelivered."

## NEW ENGLAND

Livermore Falls, Me.—The elvtr., mill and warehouse of the Oscar Holway Co. have been purchased by the J. B. Ham Co. of Lewiston, which will continue the business.—S.

Nashua, N. H.—The Nashua Beef Co. has taken over the elvtr. formerly operated by S. D. Chandler, and is now in the grain business in addition to its wholesale independent beef business.

Ashland, Me.—The Farmers Supply Corp. organized to deal in grain, flour and feed. Capital stock \$10,000. Directors are Ruel Stevens, pres., A. Ralph Bearce, treas., H. L. Bearce and R. L. Stevens.



Auburn, Me.—Edmund H. Soper, grain dealer, who was 78 years old, died Feb. 23 here. A wife and two children survive him.—S.

Lowell, Mass.—The Thorndike Coal & Grain Co., whose elvtr. was burned, is to rebuild at the same location as soon as contract can be let and work commenced. The new buildings will be semi-fireproof and of larger capacity.—S.

Holyoke, Mass.—The F. G. Burnham Co.'s plant has been leased to N. Barowsky, Willmansett, who plans to continue the grain and hay business. F. G. Burnham and F. L. Frechette both will sever their connections with the company.—S.

Boston, Mass.—John W. Cox, vice-pres. of the Charles M. Cox Co. here and also of the St. Albans Grain Co., St. Albans, Vt., died Mar. 1 at Coronado, Cal. Because of ill health he had given up active business and gone to California a few years ago.—S.

Taunton, Mass.—The Stanley Wood Milling Co. has taken over the elvtr. of the Skinner Milling Co., Pawtucket, R. I., and opened for business Feb. 27. Incorporators are Geo. H. Schefer, pres., Geo. E. Cole, vice-pres., H. S. Wood, mgr. and treas., C. R. Borden, E. E. Walker and W. A. Walker.

## NEW MEXICO

Grenville, N. M.—We deal in general mdse. and grain and have 12,000-bu. capacity elvtr. Our firm name is Stalder Merc. Co.—Stalder Merc. Co.

## NEW YORK

Binghamton, N. Y.—The Southern Tier Feed & Grain Co. has been established here to carry on a jobbing trade in these lines. S. M. Clark is mgr.

Oswego, N. Y.—Due to the death of one of the partners of the firm, we incorporated under the name of Robert Downey Co., Inc. Nothing has been done about rebuilding the Northwestern Elvtr. which burned some time ago, and it will be some time before we do anything definite.—Robert Downey Co., Inc., Thos. H. McGough, sec'y.

## BUFFALO LETTER.

The Pillsbury Flour Mills Co. secured an option on a site at Buffalo, which has at present a warehouse and elvtr. located upon it. It at one time belonged to the Mutual Transit Co.

Henry V. Burns, former grain man here, interested in the barley trade, died Feb. 20, at the age of 64. At one time he was vice-pres. of the Chamber of Commerce. His wife and daughter survive him.

Contract has been let by the Archer-Daniels Linseed Co., Minneapolis, to the Fegles Construction Co., for the erection of a 650,000-bu. elvtr. at the lake terminal of the new barge canal here. The plant will embody a marine tower and other equipment, permitting it to handle grain and flaxseed to and from both cars and vessels. The contract calls for completion by Sept. 1. The company is known as the Dellwood Elvtr. Co. here, and has at present a 1,000,000-bu. elvtr.

Maxwell M. Nowak has announced that he has again obtained control of the plant of the Curtiss Grain Corp., which recently became financially involved, and the plant will again be operated by the Nowak Milling Co. under his direction. It is said he bot the plant to protect a mortgage held by his company. The main offices of the Nowak Milling Co., now at Hammond, Ind., will be moved to Buffalo, and the new plant will be in operation within 30 days, in connection with their other plant at Hammond.—K.

The Globe Grain Co. is an entirely separate corporation from the Globe Elvtr. Co. I am president of the Globe Grain Co. and we lease and operate two elvtrs. of the Globe Elvtr. Co. Our milling plant was leased to the Quaker Oats Co., which company has discontinued at Buffalo, and we have cancelled their lease on our mill. We have not decided what we will do with the mill formerly leased to the Quaker Oats Co.—M. P. Ryley, pres. Globe Grain Co. (It was erroneously reported that Mr. Ryley had taken over the Globe Elvtr.)

## NORTH DAKOTA

McClusky, N. D.—The elvtr. of the Farmers Elvtr. Co. burned Mar. 2. It contained some grain. Loss mostly covered by insurance.

Watford, N. D.—The Farmers Co-op. Elvtr. Co. has made application to the state commission to sell \$15,000 capital stock, increasing the capital that amount.

## OHIO

Sullivan, O.—Ralph V. Snyder and Edward Stevens have bot the elvtr. of the Sullivan Co-op. Co.

Vanlue, O.—Preston Fellabaum, mgr. of the Vanlue Grain & Supply Co., has resigned. Alfred Eier will succeed him.

Utica, O.—I have purchased the elvtr. of the Farmers Exchange and am going to enlarge it, putting in some new machinery.—Geo. Branstool.

Columbus, O.—The Columbus Grain Growers Corp., recently reported as being here, was not organized here but at Columbus, Indiana. Lewis M. Marr is pres.

Bowlusville, O.—The elvtr. of L. F. Aleshire, who formerly operated it, has been leased by Henry Gainer. Mr. Gainer will buy grain, handle coal, fencing, etc.

Cincinnati, O.—Incorporators of the Perin-Brouse-Skidmore Grain & Mfg. Co. are Henry M. Brouse, Lyman Perin, Earl F. Skidmore, Buchanan Perin and Gerrit J. Fredericks, Jr.

Oakwood, O.—W. H. Hill & Sons have purchased the lot and warehouse of J. C. Harmon, and will convert the warehouse into a 15,000-bu. elvtr. It is expected to be completed within 30 days.

Troy, O.—R. P. and R. B. Heikes have bot the elvtr. of Martin & Rehmer and assumed charge Mar. 1. Martin & Rehmer will continue to operate their other elvtr. known as the Big Four Elvtr.

Pleasant Corners (Grove City p. o.), O.—Our elvtr. is now open, fully equipped with all new machinery and the storage capacity increased. Capacity is now 5000 bus. small grain and 5000 bus. ear corn. The elvtr. has three legs, one with 7x14 buckets and the other two with 6x12 buckets, corn sheller, cleaner and truck and wagon dump.—Gwinn Bros. & Co., H. W. Fish, Huntington, W. Va.

Cincinnati, O.—Pres. John De Molet of the Hay and Grain Exchange announced his appointments of the arbitration and grain inspection com'tes as follows: Arbitration, H. L. Early, chairman, John H. Dorsel, vice-chairman, W. D. Hopkins, A. C. Gale, George F. Dieterle, R. O. Strong and F. J. Currus. Grain Inspection, F. F. Collins, chairman, E. B. Terrill, vice-chairman, George Wirth, Elmer Voss and H. M. Brouse.

Springfield, O.—Denial that C. R. Baker, grain dealer, has absconded to defraud his creditors, was made by G. W. Fleming, trustee, who has been placed in charge of Baker's business by the American Trust and Savings Co. According to Fleming, Baker was sent from the city and placed in an institution because of a nervous breakdown over financial worries. His liabilities total \$16,000 and his assets are but \$4,000, of which \$2,000 has been realized by the bank, to whom Baker owed \$3,389.43 due on promissory notes.

## OKLAHOMA

Comanche, Okla.—The elvtr. of the Comanche Mill & Elvtr. Co. burned Feb. 24.

Adair, Okla.—The Mayes County Co-op. Elvtr. Co. will rebuild its elvtr. which burned Dec. 22, 1921.

Oklahoma City, Okla.—The Oklahoma Grain Dealers Ass'n will hold its annual meeting here May 11 and 12.—C. F. Prouty, sec'y.

Red Rock, Okla.—The Farmers Co-op. Elvtr. Co. has been dissolved. The reason given is that the company lost \$10,000 on last year's business.

Eddy, Okla.—A \$15,000 farmers elvtr. will be built here, according to the newly organized ass'n. A corporation has been formed and is capitalized at the above sum.

Miami, Okla.—At a meeting of the Ottawa County Farm Bureau Clarence Griffith, Guy Jennison and Charles Neck were appointed to devise ways and means of organizing a co-operative elvtr. ass'n.

Hinton, Okla.—Zobisch Bros., whose elvtr. burned last May and who has since bot and operated the elvtr. of the Sun Grain & Export Co., have definitely decided to rebuild.

Waukomis, Okla.—The Waukomis Co-op. Elvtr. Co. has changed its name to the Waukomis Grain Co. The capital stock is \$20,000 and incorporators are E. P. Atherton, R. C. Mahnke and C. J. Eifert.

Seminole, Okla.—The elvtr. of the Seminole Mill & Elvtr. Co. burned Feb. 21 with a loss of \$55,000. The fire was first noticed on the third floor, but inadequate fire fighting equipment could not confine the flames there.

Ponca City, Okla.—An elvtr. with a capacity of 70,000 bus. will be erected here by the Ponca Cit Milling Co. The building will be of concrete, fireproof construction. The company has in mind the erection of the largest mill in the state.

Guthrie, Okla.—On application of creditors whose claims total \$20,000, the U. S. District Court declared the Gresham Flour Mills Corp. a bankrupt. The firm failed several months ago, along with the Sun Grain & Export Co. and a bank, all in the same transactions.

Oklahoma City, Okla.—Plans for the uniform grading of wheat in the entire southwest will be formulated Mar. 1, at a meeting here, when representatives of the U. S. Dept. of Agri. and millers and grain men get together. Complaints are against inspectors, rather than the federal inspection system. In some cases wheat has graded No. 3 at an interior point and failed to grade better than No. 5 at Galveston.

Gage, Okla.—The plant of the Gage Milling Co. burned Feb. 21, with a loss of \$150,000, two-thirds covered by insurance. Nearly 25,000 bus. of grain and 15 cars of flour were destroyed. The cause is thought to have been spontaneous combustion, originating near the top of the mill, and thru dust explosions, spread rapidly thruout the building. Arrangements are being made by the officials to rebuild the plant.

## PENNSYLVANIA

Richland, Pa.—Chas. S. Kalbach has won a suit for \$14,929 against the Philadelphia & Reading Ry. Co. Mr. Kalbach's elvtr. was destroyed by fire last March, and he claimed sparks from a passing locomotive caused the blaze.

Philadelphia, Pa.—W. F. Hagar of W. F. Hagar & Co. died at the home of his son Feb. 27 at the age of 71. He was a member of the Commercial Exchange for 45 years, having served as president in 1889, 1890 and 1904, and was a director for 18 years.

## SOUTH DAKOTA

Manchester, S. D.—I. B. Bjornson, whose elvtr. burned last September, will rebuild.

Red Elm, S. D.—Mail addressed to L. E. Rosenthal is returned marked "removed." He was agent for Geo. C. Bagley Elvtr. Co.

Wagner, S. D.—I am mgr. of the Western Terminal Elvtr. Co. here, succeeding C. Z. Trumbo last August.—I. G. Corey. (This is incorrectly listed in the South Dakota Directory of Elvtr. Operators.)

Flandreau, S. D.—The elvtrs. we sold to the Fleischmann Saling Co. were located as follows: Flandreau, S. D., Edgerton, Chandler, Fulda, Okabena, Lakefield, Jackson, Winnebago, and Minnesota Lake, all in Minnesota. They also took over the entire organization, including personnel of The Bennett Grain Co.'s officers.—Bennett Grain Co.

## SOUTHEAST

Albany, Ala.—We have an office here and at Huntsville, doing a carlot shipping business, having leased the elvtr. here.—Mathews Bros., Luke Mathews, Jr.

Hampton, Ga.—An organization has been started and will be incorporated as the Farmers Elvtr. & Produce Co., with a capital stock of \$15,000. It is the plan of the company to build a 15,000-bu. elvtr. to care for the crops which will be raised in this section the coming year, due to the unsuccessful fight of the farmers against the boll weevil in the cotton crops. They intend to exterminate the pest by raising grain crops. An up-to-date feed mill will also be operated in connection with the elvtr. as well as a large potato curing house.



## TENNESSEE

Knoxville, Tenn.—Stockholders of the Davis-Prater Co., whose plant burned Jan. 14, will hold a meeting some time this month to discuss plans for rebuilding. Business is being conducted at present in a warehouse near the burned building and in temporary sheds erected since the fire.

Nashville, Tenn.—John M. Blake, of the H. C. Cole Milling Co., Chester, Ill., died at Athens, Ga., recently. He resided here practically all his life and was very well known to the south-eastern trade, formerly being with the Liberty Mills here. His wife, a son and a daughter survive him. He was 63 years old.

## MEMPHIS LETTER.

After 24 years as chief inspector for the Merchants Exchange, I have resigned my position and am now connected with Walter M. Browne.—E. R. Gardner.

The elvtr. of E. E. Anderson has been completed. It has a capacity of 80,000 bus. and cost \$150,000. It is planned to construct 18 or 20 more concrete bins, each to be of 25,000-bu. capacity, at a later time.

W. W. Wright, formerly with the Wright-Wilson Grain Co., Salina, Kan., is now mgr. of the Marshall Grain Co.'s office here, succeeding Chas. W. Friss. Mr. Friss is going to Oklahoma City to take charge of the hay department of the Marshall Grain Co. there.

The Valley Milling Co. is completing a new hay storage warehouse, an iron building with 20,000 square feet of floor space, with a capacity for 100 cars. The company is also installing a series of iron grain storage bins, which will have a capacity of 40,000 bus. Other bins will be added later. The improvements when complete will cost \$75,000.

## TEXAS

Longview, Tex.—Ed Nelson, prop. of the Nelson Grain Co., has opened for business.

Groom, Tex.—Farmers Grain & Elvtr. Co. increased its capital stock from \$10,000 to \$40,000.

Lockney, Tex.—The elvtr. and contents of the Lockney Coal & Grain Co. burned Feb. 24 with a loss of \$25,000. Insurance \$15,000.

Brownwood, Tex.—The Austin Mill & Grain Co. has made application to the city council to install an individual electric lighting system. They also will install a 150-h.p. gas engine.

Houston, Tex.—The new officers of the Texas Grain & Elvtr. Co., which was formerly the Waldman-Ross Grain Co., are A. A. Sterling, pres., M. Waldman, vice-pres., J. C. Garrison, sec'y-treas., and S. Freundlich, mgr.

Wichita Falls, Tex.—The J. C. Mytinger Grain Co. has let contract for a new 50,000-bu. concrete head house for the concrete tanks that have been in connection with the old house. J. C. Hunt is the owner of the elvtr. they are now operating. When the new building is complete, the capacity will be slightly more than 350,000 bus.

Lubbock, Tex.—Business men here are demanding of railroads that Lubbock be given the advantage of common-point rates. T. W. Thomas, mgr. of the Thomas Grain & Fuel Co., states that his firm would save \$50 a car on carlots of grain if the schedule were properly revised. This would enable them to compete with Amarillo and Abilene, which they cannot do now because of higher rates.

## UTAH

Ogden, Utah.—The Hylton Flour Mills incorporated with a capital stock of \$450,000. The new company is a consolidation of the Elko Milling Co., Elko, Nev., and the Holley Milling Co., taking over the mills of both companies. J. J. Hylton, Hylton, Nev., is pres., W. S. Tupper, San Leandro, Cal., vice-pres., W. W. Percival, Elko, Nev., gen. mgr., A. P. Bigelow, Ogden, Utah, treas., and A. C. Lighthall, Ogden, Utah, sec'y.

## WASHINGTON

Spokane, Wash.—The report that we incorporated for \$100,000 is correct. Ernest A. Boyd is pres. and mgr. and Herbert A. Conlee is sec'y and treas. Last fall we built a warehouse, 60'x140', of concrete base and floor and tile walls and in conjunction with the warehouse we also built a 35,000-bu. elvtr. and mill-house, the first three stories being of concrete.

and on top of that 18 bins of crib construction. We are now operating in our new place.—Boyd-Conlee Co., E. A. Boyd, pres.

## WISCONSIN

Milwaukee, Wis.—Geo. J. Zimmerman, of the Milwaukee Malting Co., died Feb. 28 after a brief illness.

Milwaukee, Wis.—William W. Nicholas has made application for membership in the Chamber of Commerce.

Milwaukee, Wis.—Herbert H. Ladish, formerly with the Ladish Milling Co., has established as a jobber in grain and feedingstuffs, with offices in the Brumder Bldg.

Milwaukee, Wis.—James E. Bennett & Co. have received membership privileges, as a company, entitling them to transact business on the floor of the Chamber of Commerce.

Biramwood, Wis.—The recently organized Biramwood Equity Co-op. Ass'n incorporated with a capital stock of \$25,000 to deal in grain, flour, feed, produce, etc. Incorporators are J. Grill, J. Krull and W. E. Schmidt.

## WYOMING

Fort Laramie, Wyo.—Chas. L. Bruce is buying grain here and plans building an elvtr.—Lee Blevins, Uva.

Deaver, Wyo.—The firm name of the elvtr. here is the Wyoming Mill & Elvtr. Co., Cheyenne. They have leased the elvtr. formerly operated by the Deaver Grain Co.—R. J. Schwindiman.

## Railroads Ask Pay Cuts.

Permission to reduce the wages of certain classes of railroad employes has been asked of the Railroad Labor Board by 101 western roads, which, with eastern carriers, appeared before the Board Mar. 7. The cuts asked for range from 4c to 27c per hour and affect shopmen, signal men, track laborers and some other classes of employes.

J. W. Higgins, executive sec'y of the Ass'n of Western Railways, who appeared for the carriers, said that men engaged in work comparable to that done on railroads and employed in 5,327 industries in 28 western states are receiving wages much lower than those paid to employes of the railroads. His statements were backed by a survey covering 318,893 employes of all classes, of whom 247,866, or 77.73%, were getting lower wages in Dec., 1921, than were paid by the railroads for similar service.

On Mar. 8, announcement was made that the entire clerical force of the C. B. & Q., numbering approximately 5,000, had agreed to accept pay reductions ranging from 2% to 6%. The minimum reduction is 1%.

A MESSAGE from Tsaritsyn, Russia, states that great crowds like hungry birds picking up falling grains followed behind every leaking sack that was unloaded from the first trainload of American relief corn unloaded in that stricken district. The corn was an unfamiliar food to most of the people, but it was welcome just the same.

## Cow Testing Boosts Commercial Feeds.

By F. L. CLARK.

"A—— is a fool for hauling out all that feed," a McGregor, Iowa farmer said a couple of years ago. A—— is an up-to-date dairy farmer who has learned by testing his cows the value of commercial feeds to supplement the hay and silage and the oats and corn which the farm affords.

Not long after making the remark the same farmer joined a cow testing association and began weighing his milk and having it tested every month. The cow tester advised feeding grain and mill feeds, saying that for every dollar spent for such feeds much more than a dollar would come back in added milk and butter fat yields. The farmer did not at first accept the advice believing that he would be throwing away money to no purpose. He finally took the cow tester's advice, and soon discovered that for every dollar's worth of extra feed his cows were giving considerably more than a dollar's worth of added product. In a short time his cows were paying better than he had ever dreamt they could. Now he is hauling feed and recently made the remark, "I find that instead of A—— being the fool for buying cottonseed meal and other feeds I have been the fool for not buying it."

The cow testing association at McGregor founded four years ago was the pioneer cow testing association in Clayton county. There are now four others. Of the twenty-six farmers in the McGregor ass'n only two had done any feeding to speak of aside from hay and ensilage. Now most of them are buying and feeding considerable commercial feedstuffs as well as grinding much feed on the farm. A farmer hauling out a load of feed is a common sight on the town streets.

The herd of John Geraghty & Sons of grade Jerseys has increased in production by the month from about 20 pounds butter fat per cow to 45 pounds. "It's all in the feeding," they say.

One of the members of the McGregor Cow Testing Ass'n is F. G. Bell, president of Gilchrist & Company, grain and seed dealers, with headquarters at McGregor. Mr. Bell is operating a farm near McGregor which he has stocked with purebred Jersey cattle. He has recently built a thousand dollar creamery on the farm and is specializing in selling butter direct to the stores in pound cartons. He has named his brand "Jersey Bell Butter" and has devised a very attractive carton using picture of Jersey herd as an illustration.

ST. LOUIS commission merchants expect to protest against the construction of the new state marketing law under which it would be necessary for all persons or firms handling farm products to obtain state licenses and file bond of \$5,000 unless payment in cash is made at the country point of purchase at the time the transaction is made. They claim this interpretation of the law will unnecessarily increase the cost of transacting business by adding taxes, bond costs and other expenses.



Load of Commercial Feed Going to Dairy of Tested Cows.



## Feedstuffs

BRIMFIELD, ILL.—The Farmers Elevator Co. is rebuilding its feed mill.

HARRISBURG, PA.—James W. Barker has succeeded the Harrisburg Grain & Feed Co.

WAURIKA, OKLA.—George L. Dodgett has bought the business of the Waurika Feed & Produce Co.

PERU, IND.—A mill for manufacturing soya bean oil and cake has recently been placed in operation here.

BUFFALO, N. Y.—The Cashancarry Feed & Grain Co. has recently been organized to handle feeds and grain.

PINE BLUFF, ARK.—The Whyte Commission Co. has completed a mill for the manufacture of molasses mixed feeds.

PORTLAND, ORE.—The Fall City Mill & Feed Co., which operates a plant in Yakima, opened an office here recently with E. L. Cooper in charge.

BRYANT, IA.—The Bryant Shipping & Feed Co. has been incorporated with capital stock of \$10,000. J. F. Claussen, Otto Gradert and J. P. Murphy are interested.

HAMBURG, IA.—Charles Zanker has bought the feed business of J. R. Strader. The new owner will enlarge the building and install a feed mill.

THE WORD "Oimeel" has been registered as trade mark No. 150,672 for use with stock and poultry feeds by John Joseph Schreiber, Minneapolis, Minn.

PALMYRA, WIS.—Oscar A. Anderson & Co. incorporated to deal in feed, etc. Capital stock, \$40,000; incorporators, A. Ives, A. Buckson, and F. Clemons.

"WHITE MULE Stock Feed" has been registered for use with stock feed under trade mark No. 149,679 by the Buckeye Cotton Oil Co., Cincinnati, O.

"DOUGLAS" has been registered as trade mark No. 152,105 by Penick & Ford, Ltd., Inc., New Orleans, La., for use with corn gluten feed and corn oil cake meal.

THE WORD "Medal" has been registered as trade mark No. 152,055 for use with wheat feed, stock feed and balanced rations by J. Cushing Co., Fitchburg, Mass.

FORT DODGE, IA.—The McDonald Flour & Feed Co. incorporated; capital stock \$30,000. Incorporators, O. C. Plaff, pres., Ben P. Larson, vice-pres., E. A. McDonald, sec'y-treas.

REGISTRATION of the word "Hygrade" as trade mark No. 152,077 has been made by the St. Albans Grain Co., St. Albans, Vt. It is to be used with a variety of stock and poultry feeds.

MOLINE, ILL.—The Teske Flour & Feed Co., which operates at Rock Island and Davenport, has bought the business of the Moline Flour & Feed Co. Albert Teske will manage the local branch.

A CIRCULAR device showing the representation of a lion, and with the words "Monarch Brand Cotton Seed Meal 43% Protein" has been registered as trade mark No. 149,618 for

use with cotton seed meal by the Ashcraft Wilkinson Co., Atlanta, Ga.

THE OUTLINE of a figure eight, upon which is printed the words "Great Eight," and above which appears the word "Gober's," has been registered for use with stock and poultry feed as trade mark No. 151,571 by the Aviston Flour Co., Inc., Jackson, Miss.

ST. LOUIS, MO.—Fifteen blank checks were stolen some time ago from the office of the Bledsoe Flour & Feed Co. Since that time, 4 of the checks have been cashed, each bearing a signature purporting to be that of William T. Bledsoe. Police have been asked to attempt to locate the culprit.

A DRAWING showing two boys carrying a sack upon which is printed "We carry nothing but the best," and the signature "The Whitmore Boys," has been registered as trade mark No. 133,898 for use with poultry and stock feeds of various kinds by the St. Albans Grain Co., St. Albans, Vt.

BUFFALO, N. Y.—Maxwell M. Nowak has obtained control of the plant of the Curtiss Grain Corporation, which recently became involved in financial difficulties, and the plant will be operated by the Nowak Milling Corporation. The purchase was made to protect a mortgage held by the Nowak Milling Corporation, which formerly operated the plant.

HAMMOND, IND.—The Midwest Feed & Fertilizer Co. has been organized to take over the plant and business of the Chicago Feed & Fertilizer Co., which was in financial difficulties some time ago. The new company is capitalized at \$70,000 and many of the officers and employees were with the old firm. Ralph M. Voorhees is pres. and gen'l manager; Wm. E. Orr, vice-pres.; and Walter R. Patterson, sec'y-treas.

KANSAS CITY, MO.—The Reserve, Inc., has been organized here for the purpose of operating a transit flour warehouse so that surplus stocks of flour made by Kansas mills can be held in Kansas City instead of being shipped to points where it enters the class of distressed flour. A 4-story fireproof building has been leased for use as a warehouse and machinery for handling flour will be installed. George C. and Fred O. Shane, of Philadelphia; William Reid, of Kansas City; L. C. Carroll, of North Platte, Neb.; and C. L. Aller, Crete, Neb., are directors.

### Transit Privileges on Feeds in Texas.

At a recent hearing before the Texas Traffic Bureau at Dallas, Tex., the question of granting transit or stopover privileges on mixed feed, the same as on bran and shorts, was considered. The granting of the privilege was opposed by some mixed feed manufacturers and by the Fort Worth Freight Bureau, and a further hearing was held Mar. 7 at Dallas.

The carriers have proposed granting the privilege, or, as an alternative, the cancellation of the privilege on bran and shorts.

The earlier hearing having shown a controversy to exist without giving the members of the Bureau enough information upon which to base a decision, it was for the purpose of giving an additional opportunity for all to present their views that the second hearing was held Mar. 7.

OFFERS of No. 2 mixed corn and No. 2 rye for seed, March delivery at Atlantic Ports, were asked for Mar. 6 by the Purchasing Commission for Russian Relief. A total of 6,500 tons of corn grits is also wanted.

BARLEY shipped from Alexandria, Egypt, to London, Eng., was so dirty it clogged the pneumatic elevator used to unload the cargo, by the Port of London Authority, causing delays in unloading for which the steamship company made claim against Shipton & Sons. The court ruled that the steamship company was entitled to damages for extra expense, but not for the delay.

### Meetings of Feed Dealers Federation.

The midwinter meeting of the Eastern Federation of Feed Merchants was held Feb. 14-15 at Binghamton, N. Y., the program being an interesting and profitable one.

"The Cost of Doing Business," was discussed by Paul Mehl, of the Connecticut Agricultural College, who is in charge of a survey of the subject now being conducted co-operatively by the College and the Federation.

A resolution to affiliate with the Grain Dealers National Ass'n was adopted, and the uniform trade rules governing transactions in feedingstuffs were adopted. These rules have now been approved by the majority of organizations interested in the handling of feedstuffs.

A plan for the formulation of the county unit of organization to increase the Federation's membership was discussed.

Other speakers who addressed the convention included S. T. Edwards, of Chicago, and Prof. I. G. Davis, of the Connecticut Agricultural College, who spoke on "Efficient Distribution of Feeds."

The eastern section of the Federation held a meeting at Springfield, Mass., on Feb. 22, considering matters of interest to the members located in that section.

W. F. Fletcher, of Southwick, Mass., attacked three agencies which he declared make up a dark cloud over the horizon of the grain and feed business. These he enumerated as the U. S. Grain Growers, Inc., the farmers bloc in Congress and the farm and labor combinations.

This section of the Federation also adopted the uniform feed rules.

### Adulteration and Misbranding.

Under the Food and Drugs Act, the following judgments have been rendered in the United States District Courts for the Bureau of Chemistry:

The Monarch Mills, Chattanooga, Tenn., labeled dairy feed to indicate a greater percentage of protein and fat, and a lesser percentage of fibre, than analysis showed. Fine of \$125 and costs was imposed when plea of guilty was entered.

The Central Oil Co., Macon, Ga., shipped cottonseed meal labeled to indicate 7% ammonia and 36% protein when it did not contain those percentages, and on payment of costs of the proceedings and filing bond the product was released for relabeling. Two other cases against the same company resulted similarly.

The Lamar Alfalfa Milling Co., May Valley, Colo., shipped a quantity of alfalfa meal that was seized at St. Louis, Mo., and the company charged with violation of the Act in that the article seized consisted in whole or in part of a filthy and decomposed vegetable substance. No claimant appeared for the property and it was ordered destroyed.

The Topeka Flour Mill, Topeka, Kan., was charged with failure to mark the contents of jute bags of flour to indicate the weight of the contents; also, with mixing and packing excessive moisture with the product and substituting it for flour. The allegation defined the article as "an imitation of, and offered for sale under the distinctive name of, another article." The shipment was released to the claimant on execution of a bond in conformity with the Act.

### Another Grain Marketing Organization.

A conference of several wheat marketing organizations was held Mar. 2 at Denver, and plans were made for attempting to form a national federation of wheat marketing ass'ns operating on the 100% pool basis.

A com'te was appointed to make preliminary arrangements for the national organization, which it is purposed to put into effect as soon as the state societies of the middle west have actively entered the field of marketing.

The com'te consists of Geo. C. Jewett, gen'l mgr. North-Western Wheat Growers, Associated, Portland, Ore.; W. K. Lansdon, state vice-pres. Farmers Union, Salina, Kan.; D. G. Murley, pres. Oklahoma Wheat Growers Ass'n. The first meeting of the com'te was held in Kansas City, Mar. 9.

### Feed Movement in February.

Receipts and shipments of feedstuffs at the various markets during February, compared with February, 1921, were as follows:

	Receipts		Shipments	
	1922.	1921.	1922.	1921.
Baltimore, tons	1,528	1,407	.....	.....
Cincinnati, tons	2,490	1,560	.....	.....
Chicago, lbs.	41,535,000	25,153,000	85,329,000	55,954,000
Kansas City, tons, bran	1,880	2,240	15,360	12,980
Los Angeles, cars	169	318	.....	.....
Milwaukee, tons	1,410	1,260	24,732	15,324
New York, tons	165	.....	222,000	.....
San Francisco, tons, bran	812	89	.....	.....
St. Louis, sacks	202,250	66,120	601,410	130,150



## Seeds

CYNTHIANA, KY.—Stewart & Redd have succeeded Hamon & Redd in the seed business.

MALAGA, N. J.—The seed warehouse of Thomas Evans was destroyed by fire recently.

SPRINGFIELD, ILL., Mar. 8.—Clover seeding is under way.—Clarence J. Root, meteorologist.

LEXINGTON, KY.—C. M. Marshall & Co. have sold their seed business to the Fayette County Farmers Union.

NASHVILLE, TENN.—The Hudmon Seed Co. has moved to a new location and is making improvements in its plant.

NEWELL, S. D.—We expect to buy a seed cleaner this fall in case there is a seed crop raised here.—M. E. Hafner.

THE BILL authorizing expenditures for seed grain to be lent by the government to farmers in crop failure regions of the northwest has been defeated in the house.

TOPEKA, KAN.—Work has been started on a new structure to replace the seed storage house of D. O. Coe Seed & Grain Co. which burned recently.

THAT much of the seed corn is infected with disease, requiring careful selection and testing is a statement recently made by A. J. Surratt, agricultural statistician for Illinois.

A REPORT of the house com'te handling the Sinclair Bill reduces the appropriation under it for loaning to farmers in areas of crop failure to \$2,000,000. As it passed the Senate the bill carried an appropriation of \$5,000,000.

THE NAME "Van Antwerps," written in a certain manner, and followed by a line reading "The Best Only," has been registered as trade mark No. 152,635 for use with seeds by Van Antwerps Drug Corporation, Inc., Mobile, Ala.

A DECISION has recently been rendered by a court in New Orleans, La., upholding the standard disclaimer or non-warranty clause used by many seedsmen in their catalogs, advertising matter and on invoices and letter-heads.

OFFERS for 2,500 long tons of seed field peas were received by the American-Relief Administration Mar. 1. The peas are to be bought for the Russian government for seeding purposes, and must originate in the middle western states.

FREE SEEDS will not be available for the repair of political fences of congressmen, if the recommendation of the house appropriations

com'te prevails. The com'te eliminated the amount of \$360,000 carried by last year's bill for distribution of "free" seeds by members of congress.

SEATTLE, WASH.—The Woodruff-Boyce Seed Co. has been reorganized. Mr. Boyce will continue to operate a retail seed store, using part of the equipment owned by the old firm. A creditors com'te estimates that a dividend of 40% to 50% will be paid creditors of the Woodruff-Boyce Seed Co.

### From the Seed Trade.

MINNEAPOLIS, MINN.—The flaxseed unloadings for the month of February for the Minneapolis mills were 170,669 gross bushels, while the actual working capacity of the mills would be about four times this amount. The shipments from the Argentine to the United States continue very light. Meal continues in good demand, and with the small output of the mills practically sold for the next thirty days, prices are holding firm.—Archer-Daniels Linseed Co.

### Flaxseed Tests in Western Canada.

An experiment is being carried on with fibre producing flax in Western Canada, the test crops being grown on irrigated land at Tilley, Alberta, about 120 miles east of Calgary.

A small quantity of seed was planted in 1920, and the seed obtained from this was sown again in 1921. Germination tests of the latter crop have been made, and a report of the Dominion Dep't of Agriculture shows these to have been quite satisfactory. A record for all Canada was established when a 4-day germination of 75% was shown; and 97%, which was the result of a 10-day test, is the highest average of the year.

There is a demand in Europe for good quality seed and it is hoped that seed produced in Western Canada can be introduced there. An attempt to do this will shortly be made, enough being sent to Ireland to seed 25 acres or more.

### Growing Seeds to Order.

A plan for the production of alfalfa seed co-operatively under an arrangement which permits control of its quality in the field and thru the various processes of handling and marketing is being carried out at Delta, Millard County, Utah, by the J. G. Peppard Seed Co. in conjunction with local farmers.

About 7,000 acres of the 1921 crop were under contract. The farmers agreed to seed, produce, harvest and thresh the seed under the direction and instruction of field men of the J. G. Peppard Seed Co., and to deliver the threshed seed to the company's modern plant in Delta. There it is processed, tested in the laboratory, and its grade certified. Four primary grades have been established, and there is a dockage schedule for dodder when seeds of this noxious weed are present. The company finances the production of the crop, and after the seed has been finished and its grade determined it is sold to the company at the price in the open competitive market. A bulletin of prices or bids for the various grades is posted daily. For the services which he receives, the farmer pays a stipulated amount covering their cost.

This is a step in advance of the service of a seedsman who merely buys whatever seed is available, then processes it and offers it for sale. A trade mark or brand name for the seed so obtained has been registered, it being "Bee Hive." It is used to designate seed "grown to order," and the thought is that in time it will be possible to obtain a fair premium for it.

The results of the company's field work this year have been very satisfactory, and contracts with growers have been renewed for a period of 3 years.

ABOUT 50 new hybrids of grain sorghums developed by the Dep't of Agriculture at field stations in Texas are said to have excellent grain and forage value.

## ELLIS DRIERS

× ×

You may travel the wide world over but you will fail to find a grain drier comparable to the Ellis. We have been building grain driers for 24 years and each year we have made improvements—not the radical kind but conservative changes which have really bettered the machine. Today, you can purchase an Ellis Drier with the perfect assurance that you are getting the best that skill and good materials can produce. May we have your inquiry?

× ×

### THE ELLIS DRIER CO.

Roosevelt Road and Talman Ave.  
CHICAGO, U. S. A.

## CIFER CODES

Use a good Telegraph Cipher Code, Prevent Errors, Reduce the Cost of Sending Messages and Prevent Confusions Becoming Known to Agents.

Universal Grain Code, the most complete code published for the use of grain dealers and millers. Its use will reduce your tolls one-half. Its 150 pages contain 14,910 code words for grain trade terms and expressions; no two near enough alike to cause confusion. Bond paper, flexible leather, \$3.00; Book paper, board cover, \$1.50.

Robinson Cipher Code, revised, with 1912 and 1917 Supplements for domestic grain business. Bound in flexible leather, price \$2.25; cloth, \$1.75.

A. B. C. Improved 5th Edition, contains a complete set of five letter code words for every expression in the former edition. Any two of these words may be combined and sent as one word, reducing telegraph tolls 50 per cent. Price in English, \$18.00.

Miller's Code (1917), for milling and flour trades, 3½x6 inches, 77 pages, \$2.00.

Baltimore Export Cable Code, most popular and simplest code for export trade. Bound in red leather, third grain edition, 413 pages, size 7x9½ inches, \$15.00; fourth edition, for grain, stocks, bonds and general merchandise, 160 pages, 6½x9 inches, \$15.00.

Cross Telegraphic Cipher Code, for provision and grain trade. 145 pages, bound in flexible leather, \$2.00.

Your Name in gilt letters stamped on front cover of any of the above books for 35 cents extra. Any code upon short notice.

### Grain Dealers Journal

309 S. La Salle Street, Chicago, Ill.

### Receipts and Shipments of Seeds.

Receipts and shipments of seeds at the various markets during February, compared with February, 1921, were as follows:

#### FLAXSEED.

	Receipts		Shipments	
	1922.	1921.	1922.	1921.
Chicago, bus....	96,000	17,000	1,000	3,000
Duluth, bus....	72,197	107,251	79,261	22,955
Ft. William, bus.	63,071	335,594	123,547	27,645
Milwaukee, bus..	15,730	69,340	13,769	
Minneapolis, bus..	201,200	262,050	114,100	37,050

#### CLOVER.

Chicago, lbs....	3,674,000	2,165,000	2,164,000	1,974,000
Milwaukee, lbs...	380,188	70,480	1,760,917	740,069
New York, bags...			1,658	
Toledo, bags....	3,599	8,457	12,044	11,332

#### TIMOTHY.

Chicago, lbs....	2,899,000	2,076,000	4,108,000	2,978,000
Milwaukee, lbs...	831,402	210,000	266,527	299,081
New York, bags...			450	
Toledo, bags....	2,399	2,045	2,168	3,312

#### OTHER GRASS SEEDS.

Chicago, lbs....	2,836,000	1,546,000	1,698,000	2,187,000
------------------	-----------	-----------	-----------	-----------

#### KAUF AND MILO.

Kansas City, bus.	536,800	463,100	352,000	211,000
Los Angeles, cars	180	104		
St. Joseph, bus..	1,500	22,500		
St. Louis, bus...	42,000	112,900	15,280	27,810
Wichita, bus....	1,200	15,000	1,200	15,000

#### OTHER SEEDS.

San Francisco, beans, sacks....	56,664	48,402		
Toledo, alsike, sacks .....	1,241	1,180	2,130	1,199



## Grain Carriers

IT was reported recently that shipments of grain to Vancouver, B. C., have been embargoed because of congestion at that port.

UNLESS substantial assistance can be obtained before July 1, the Kansas City, Mexico and Orient Railroad must be abandoned, it was stated in an official announcement made at New York Feb. 28.

THE Standard Co-operative Co., of Standard, Ill., has sued the C. M. & St. P. Railroad to recover \$1,050 damages alleged to have been sustained thru loss of corn in transit from a car shipped Aug. 26, 1919.

CHARGES for drying grain at Philadelphia were changed by the Pennsylvania Railroad, effective Jan. 15, making the rates at that port now the same as at Baltimore. Previously the charge at Philadelphia was higher.

PROPOSED reduction in rates on grain and grain products from Illinois points to New Orleans and certain other Gulf Ports for export were suspended until July 3 by an order of the Interstate Commerce Commission issued Mar. 6.

TO RESTORE the relationship that existed prior to the rate reduction of Jan. 1 between St. Louis and Chicago, further reductions have been made in the rates on grain from St. Louis and East St. Louis to points in Central Freight Ass'n Territory.

A BILL introduced in congress by Rep. Beck, of Wisconsin, would require railroads to obtain permission of the Interstate Commerce Commission before they may "farm" out repair and construction work to leased or privately owned shops.

TARIFFS which attempted to increase the charge for out of line hauls on Western Canadian grain moving all rail or lake and rail to milling points in Eastern Canada have been ordered suspended by the Canadian Board of Railway Commissioners.

A LETTER was recently sent out by the Philadelphia Commercial Exchange to the various trade and commercial organizations in that city enlisting their assistance in a united effort to resist any attempts to eliminate existing rail differentials affecting North Atlantic ports.

A TARIFF recently issued by the C. St. P. M. & O. and the C. G. W. reduces, effective Apr. 1, the rate on wheat from Council Bluffs and Omaha to Minneapolis from 17c to 16½c, and the rate on corn from 15½c to 15c. Other carriers are expected to make similar reductions.

REDUCTIONS varying from one-half cent to 2½c in the rates on grain from about 90 points in the central states to Cincinnati and Ohio River Crossings are expected shortly as a result of a conference recently held in Washington between railroad officials and traffic men representing the grain trade.

A MODIFICATION of the order of the Interstate Commerce Commission making the reduction in freight rates which became effective in January authorizes departures from the exact percentages prescribed in the order to restore or maintain the previously existing relationships between markets.

THE U. S. Supreme Court has dismissed the case of the state of Texas against the Interstate Commerce Commission and the Railroad Labor Board on the ground that the case could not be maintained on the original docket. The suit was for the purpose of enjoining enforcement of the Transportation Act of 1920 in Texas.

THE QUESTION of re-establishing the pre-war difference of 5c per cwt. between freight rates to Galveston and Baltimore for export from middle western and certain southwestern territory is again being brought forward. It is expected that the Interstate Commerce Commission will be petitioned to restore the relationship. The present difference is 8c.

EXECUTIVES of trunk line railroads, meeting in New York Feb. 27, instructed their attorneys to obtain a review in court of the ruling of the Interstate Commerce Commission awarding eastern carriers an increase of 15% in their share of rates on interchanged freight. It is understood the trunk lines will attempt to enjoin the Commission from enforcing its order.

THE TARIFFS making a 10% reduction, effective Jan. 16, in the rates on various products of the farm, orchard and range were rejected by the New York Public Service Commission in so far as they related to reduced rates on rice and rice products. The effect is to cancel the proposed reduced rates on rice and rice products on New York intrastate traffic.

A FORMAL complaint has been filed with the Interstate Commerce Commission by the Milwaukee Chamber of Commerce seeking a reduction in rates on grain from southern Minnesota stations to Milwaukee. The carriers have 20 days from the time notice of the complaint is served on them to file an answer, and thereafter it is expected that the matter will be set for hearing.

PRESENT forms of both straight and order Bs/L may be used in Official Classification Territory from Mar. 15 to July 1, providing each is stamped to show that the provisions of the new B/L apply. In Western and Southern Territories present forms of straight Bs/L may be used, but present forms of order Bs/L may not be used after Mar. 15. New forms of order Bs/L will be available at all stations.

A HEARING will be held by the Interstate Commerce Commission at Kansas City Mar. 30, at which time an effort will be made to obtain from the Commission a ruling that will permit movement of grain in Kansas City elevators at present freight rates instead of the old rates under which the grain was put in store. The application for such a ruling was denied in an informal hearing at Washington, but that was not final.

RAILROADS operating in California, Oregon, Idaho, New Mexico and Arizona applied recently for a modification of the order in the Western Grain Rate Case reducing the rates. The change asked for is that oats and barley be not included with corn in the list of coarse grains, the carriers contending that in the territory named one rate was in effect for all grains prior to the war, and requesting the continuation of this practice.

SUIT has been started against the C. M. & St. P. Railroad and James C. Davis, who acted as agent under the Transportation Act of 1920, by the Farmers Co-op. Grain & Supply Co. of Cedar Point, Ill., to recover \$1,000 damages. The plaintiffs allege that on July 10, 1919, they shipped a car of white oats, that the car was not given the proper care, and that they suffered the damage claimed by reason of the carrier's negligence.

SUIT to test the validity of the union closed shop as it applies to railroads of the United States was started recently in federal district court at Boulder, Colo., by R. F. Jones, a former C. & S. conductor. The Order of Railway Conductors and the Brotherhood of Railway Trainmen are named as co-defendants by Jones, who asks for \$200,000 damages, alleging that the unions were responsible for keeping him out of employment for 12 years.

PROPORTIONAL rates on grain and flour from Kansas City to Chicago and Minneapolis are made as follows under a technicality in C. B. & Q. tariffs: wheat and flour, 16c; corn, 14½c. To St. Louis the rates are 12c on wheat and 11c on corn; and to Peoria, 14½c on wheat and 13c on corn. The proportional rate from Omaha to Kansas City is also affected, being made 7c on wheat and 6½c on coarse grains. Inbound local rates from Iowa and Missouri points to Kansas City are affected, and the rates to St. Louis will have the effect of reducing the rate from Kansas City to New Orleans via certain routes.

A TARIFF of the Missouri Pacific Railroad, proposing to increase from \$2.50 to \$7 the interchange switching charges at certain stations, has been suspended by the Interstate Commerce Commission until June 16. The stations where the increase was to have applied include Arkansas City, Fort Scott, Lyons, Paola, Pittsburg and Pleasanton, Kan., and Harrisonville and Liberty, Mo. The same tariff carried an increase from \$2.50 to \$5 per car at Fredonia, Kan., and from \$4 to \$7 at Lamar, Mo.

MILLING and other transit privileges at Alton, St. Louis and East St. Louis on wheat from Peoria, when from beyond, have been cancelled by the C. P. & St. L. The effect is to discontinue these privileges on wheat from beyond Peoria, which includes that from Minneapolis, to trunk line territory. The cancellation was made because roads east of the T., St. L. & W. junctions demanded percentages of the regular East St. Louis reshipping rate instead of accepting a division of the Peoria to trunk line territory rate.

THE APPEAL of the Great Northern Railway and the Director General of Railroads in a case against the Merchants Elevator Co., of Minneapolis, was dismissed Feb. 27 by the U. S. Supreme Court. The case involved a charge of \$5 per day on grain reconsigned or diverted from the original destination and Minnesota courts had ruled against the carrier. The railroad and the government sought to have the case reviewed on the ground that federal courts and not state courts should pass upon rate questions when interstate commerce is concerned.

EFFECTIVE Mar. 18, via the Monon, and Mar. 20, via the Illinois Central, reshipping rates on grain and grain products from Chicago to South Atlantic and Gulf Ports for export will be as follows: grain, 22½c per cwt.; flour, 23½c; grain products other than flour, 24½c. On grain by-products the reshipping rate and the local rate will be 26½c. These rates are the same as those to New York for export. Via the Monon they apply to all South Atlantic and Gulf Ports (except Texas ports), but via the Illinois Central they apply only to New Orleans.

SOME CHANGES in the thru export B/L have been recommended by the Shipping Board. Among the reasons given by the Board for failure to approve the B/L which will become effective Mar. 15 is the one that the Board intends to promulgate a port B/L in the near future and believes there should be no variance in the essential features of the two. The changes recommended are in Part II and relate to the value of goods and to claims for loss, damage or delay. The Interstate Commerce Commission held hearings Mar. 4 on the recommendations.

### Oppose Rail Pool Plan.

Opposition to the plan for centralized purchase, repair and distribution of railroad equipment has been voiced by Daniel Willard, pres. of the B. & O., and R. H. Aishton, pres. of the American Railway Ass'n.

They said the car service division of the American Railway Ass'n, at all times of car shortage anywhere, orders cars to the points where they are needed just as any other centralized control body would do. Mr. Willard said it would take 20 years to put into effect a new plan as a substitute for the one now in use.

Mr. Aishton, a former pres. of the C. & N-W., and during the period of federal control of the railroads the federal manager for the northwestern region, said that the net result of the government's efforts to standardize engines and cars during the war was the addition of two or three standards for locomotives to the number already in existence. He also stated that centralization of purchases by the government was met by the creation of a central selling agency by the sellers and the elimination of competition in selling.



### Extensions of Time for Filing Claims.

The time in which claims may be filed to recover straight overcharges occurring during the period of government control of railroads has been extended to Sept. 1, 1922. Suits to enforce awards made against the Director General of Railroads by the Interstate Commerce Commission may be filed any time within one year from the date of the award.

These are provisions of a bill recently passed by Congress the effect of which is to extend as stated a period that previously was scheduled to expire Feb. 28.

Only straight overcharge claims in which a rate or amount in excess of that provided in legally published tariffs was collected are affected. Loss and damage claims do not come within the scope of the law.

### Proposes New Rate Law.

A bill has been introduced in congress by Senator Trammell, of Florida, to change somewhat the method of making rates for freight and passenger traffic.

Under this bill, only increases in rates would be granted on authority of the Interstate Commerce Commission, and the carriers would be left free to make reductions without asking approval of the Commission. Under the present arrangement, proposals to reduce rates are subject to investigation and suspension in the same manner as proposals to increase rates.

Senator Trammell's bill, known as S. 3189, would give shippers at least 60 days' notice of hearings on applications for rate increases, and at such hearings representatives of state railroad commissions, shippers or the public might intervene in opposition to the proposed increases. It has been referred to the senate Com'te on Interstate Commerce.

### Railroad Guarantee Period Ends.

On Mar. 1, two important changes affecting the relations between the government and the railroads became effective. The section of the Transportation Act naming 6% as the return which railroads are entitled to earn expired, and the period during which the roads controlled by the government in the war were entitled to ask federal loans to aid them in continuing operations after their return to private management.

The provision of the Transportation Act relating to earnings is superseded by the provision which requires the Interstate Commerce Commission to make rates that will give the carriers a reasonable return on the value of the property used in transportation. Almost continuously since early in January, the Commission has been holding hearings on the general rate situation, and some decision undoubtedly will be rendered after these hearings have been completed.

The subject of transportation rates is of prime importance to every individual, and

because of the general opinion that there can be no return to lasting prosperity until rates are adjusted and made more reasonable, all sections of the country and all persons hope the decision and the reductions will not be long delayed.

Applications for loans, aggregating a large amount, were filed with the Commission in the period immediately preceding the expiration of the loan provision.

### Federal Authority Controls Rates Within a State.

The Supreme Court of the United States Feb. 27 decided against the Wisconsin State Railroad Commission in its suit against the C., B. & Q. R. R. Co. to restrain the railroads from putting into effect the rate of 3.6c per

mile allowed by the Interstate Commerce Commission. The court said:

Congress, in its control of its interstate commerce system, is seeking in the Transportation Act to make the system adequate to the needs of the country by securing for it a reasonable compensatory return for all the work it does. The states are seeking to use that same system for intrastate traffic. That entails large duties and expenditures on the interstate commerce system which may burden it unless compensation is received for the intrastate business. Congress as the dominant controller of interstate commerce may, therefore, restrain undue limitation of the earning power of the interstate commerce system in doing State work. \* \* \*

It can impose any reasonable conditions of a State's use of interstate carriers for intrastate commerce it deems necessary or desirable. This is because of the supremacy of the national power in this field.

While "interstate and intrastate commerce are ordinarily subjected to regulation by different sovereignties," the court explained, "yet when they are so mingled together that the supreme authority, the nation, cannot exercise complete effective control over interstate commerce without incidental regulation of intrastate commerce, such incidental regulation is not an invasion of State authority."

### D. F. Piazzek Retires.

DeForest Piazzek has retired from the grain business to spend his time in the development of a farm near Stanley, Kan.

With W. T. Kemper he organized the Kemper Grain Co., and after Mr. Kemper's retirement from the company he continued the business for many years under that name. He gave up his business in the early days of the war to become a vice pres. and zone agent of the U. S. Food Administration Grain Corporation. He was among the first of the zone agents to realize that they lacked authority to interfere unduly with private business, and there was very little friction in the wide scope of territory controlled by him.

After the war he joined Julius H. Barnes, pres. of the U. S. Grain Corporation, in forming the Barnes-Piazzek Co., at Kansas City, the business of which has just been taken over by the Nye & Jenks Grain Co., of Omaha, in which Mr. Barnes also is interested, and which will continue to operate the Wabash Elevator at Kansas City.

THE JAPANESE banking situation is understood to be critical as a result of recent erratic markets. Rice is one of the commodities which have fallen greatly in value.

THE ANNUAL report of the Corn Products Refining Co. shows net income for 1921 of \$6,326,358, which was about half the net income of the previous year. Gross income was also about half as much in 1921 as in 1920. Total surplus was increased to \$45,122,134 from \$43,521,704.



D. F. Piazzek, Kansas City, Mo.

## Radio Telephone Market Quotations

Are now being broadcasted every half hour from 9:30 a. m. to 1:15 p. m. by The Chicago Board of Trade, in conjunction with the Westinghouse Electric & Mfg. Co.

The above is in addition to financial and news reports that commence at 2:15 p. m. **daily.**

At 8 p. m. a musical program that continues for one hour.

### This Entertainment and These Quotations Are Absolutely Free to You

Grain and stock men within a radius of 500 miles are deeply interested.

Better write us today for information concerning cost of installation of this wonderful device.

Reasonable delivery can be made on orders placed now. Write or wire.

## THE NASH-ODELL COMPANY

(Formerly Charles A. Nash, Inc.)

Telephone Franklin 1085-1086

172 North Franklin Street, Chicago



## Supreme Court Decisions

**Measure of Damages for Carrier's Failure to Deliver.**—"When a common carrier fails to deliver goods according to the terms of the contract, the measure of damages is the value of the goods at the time and place at which it is agreed to deliver them, less the transportation charges."—*Central of Georgia Ry. Co. v. American Coal Co.* Court of Appeals of Georgia. 110 S. E. 320.

**Carrier's Liability as Warehouseman.**—"Under a stipulation in a B/L of an interstate shipment that the carrier shall be liable, as warehouseman only, for goods after arrival at destination and not removed within the specified time, the carrier is liable only for negligence; and if the loss admittedly occurs by fire the burden is on the plaintiff to prove negligence, notwithstanding the rule may be different under state law."—*Central of Georgia Ry. Co. v. Owens.* Court of Appeals of Georgia. 110 S. E. 339.

**Application of Blue Sky Law to Sales of Elevator Stock.**—Or. L. §§ 6838, 6848, held not to apply to purchase of stock of a farmer elevator company from the company by citizens of a community to induce it to construct an elevator at that place, where the trial court found that the stock was not sold for profit nor on commission, nor was the stock offered to the public, as the statute cannot be enlarged by construction, in view of section 799, subds. 1, 34, and section 2409.—*Kirk v. Farmers Union Grain Agency.* Supreme Court of Oregon. 202 Pac. 731.

**Refusal of Shipment by Consignee and Sale by Carrier.**—In an action against an initial carrier for conversion by a connecting carrier in selling the shipment for transportation charges on refusal thereof by consignee, the shipper cannot recover for negligence in failing to notify the connecting carrier that it held, as alleged in the complaint, an indemnity bond for payment of the freight, and that plaintiff was arranging to sell the goods to others; the allegation as to the bond being necessary to show that the sale by the carrier was wrongful.—*McCasin v. Southern Pac. Co.* Supreme Court of California. 203 Pac. 742.

**Carrier Liable for Loss from Strikes.**—Though a B/L provided the carrier should not be liable for loss caused by strikes, to make out a prima facie case the shipper is only required to show delivery to the carrier and failure to deliver at destination, and the burden of showing the facts necessary to exempt it from liability is on the carrier. Irrespective of a provision in the B/L that the carrier should not be liable for loss occurring from strikes, it is liable for delay on account of a strike unless it uses all reasonable efforts to procure men to run the trains and avoid delay and consequent damage.—*Am. Fruit Dist. of California v. Hines.* District Court of Appeal, California. 203 Pac. 821.

**Warranty of Grain Cleaning Machine.**—Where a cleaner was warranted to do certain work with respect to separating oats from No. 1 or No. 2 wheat or barley and to have a capacity of from 600 to 800 bushels per hour of wheat and barley, the warranty as to capacity held not limited to No. 1 and No. 2 wheat. Where there was nothing in the written order for a cleaner or the warranties thereof indicating that the buyer desired a self-acting and automatic operating cleaner, evidence that the sellers' salesman represented that it was self-adjusting and automatic and required only occasional attention was not admissible.—*J. L. Owens Co. v. Leland Farmers Elevator Co.* Supreme Court of Iowa. 185 N. W. 590.

**Buyer Paying Part of Price May Replevin Corn Bought.**—Under Rev. St. 1919, § 2170, where a buyer of corn paid \$50 down to bind the bargain, the title passed to him subject to the seller's right of possession until payment of the balance of the purchase price, and he could maintain replevin against the seller. Though title to corn sold had passed to the buyer, where he was not at the place of delivery to receive it, the seller, who had hauled two loads seven miles to such place, and who thereupon sold it to a third person, was not liable for his failure to deliver such loads, but was not thereby excused

for failing to deliver the balance of the corn sold.—*Lumsden v. Howard.* Springfield Court of Appeals, Missouri. 236 S. W. 420.

**Seller of Seed Bound by Usages of Particular Market.**—In an action by a seller of seed potatoes for damages resulting from a resale, defendant claiming that the potatoes were not up to the standard of seed potatoes as understood in the locality, it was not error to refuse to submit an inquiry as to whether plaintiff had any knowledge of such custom or usage, it being presumed that plaintiff entered into the contract as affected by the usages and customs of the particular market. Where potatoes shipped are not up to contract requirements, buyer could either accept the shipment and hold seller responsible for the potatoes below standard, or reject the shipment altogether as not being in compliance with the contract.—*Rutherford-Brede Co. v. Reichard & Schulte Co.* Court of Civil Appeals of Texas. 235 S. W. 1108.

**Passage of Title Under B/L.**—Title held to pass under an "order bill" of lading negotiable under U. S. Comp. St. §§ 8604a to 8604n, where such bill was sent to a bank with a draft attached, and the shipment was delivered without payment of the draft, and the shipment could not be recovered from innocent purchasers, in view of a dealer's contract tending to show that it was the intention that title should pass to the person to whom the shipment was delivered, when such shipment was delivered to the carrier. Carrier violated its duty under a B/L shipping "to F. Company, Paris, Texas, notify J." when it delivered the shipment to J. without an order from F. Company; the bill being an "order bill," and negotiable under U. S. Comp. St. §§ 8604a to 8604n.—*F. L. Shaw Co. v. Coleman.* Court of Civil Appeals of Texas. 236 S. W. 178.

## Debts Not Released by Bankruptcy.

Taxes, and earnings of employees within three months, are not released by discharge in bankruptcy, under the new law, approved Jan. 7, 1922, reading as follows:

"Sec. 17. Debts Not Affected by a Discharge.—A discharge in bankruptcy shall release a bankrupt from all of his provable debts, except such as (first) are due as a tax levied by the United States, the state, county, district, or municipality in which he resides; (second) are liabilities for obtaining property by false pretenses or false representations, or for wilful and malicious injuries to the person or property of another, or for alimony due or to become due, or for maintenance or support of wife or child, or for seduction of an unmarried female, or for breach of promise of marriage accompanied by seduction, or for criminal conversation; (third) have not been duly scheduled in time for proof and allowance, with the name of the creditor, if known to the bankrupt, unless such creditor had notice or actual knowledge of the proceedings in bankruptcy; or (fourth) were created by his fraud, embezzlement, misappropriation, or defalcation while acting as an officer or in any fiduciary capacity; or (fifth) are for wages due to workmen, clerks, traveling or city salesmen, or servants, which have been earned within three months before the date of

commencement of the proceedings in bankruptcy; or (sixth) are due for moneys of an employee received or retained by his employer to secure the faithful performance by such employee of the terms of a contract of employment."

## Supply Trade

Minneapolis, Minn.—A. P. Hustad Co., elevator builders, have moved their offices from the Andrus Bldg. to 126 S. 9th st.

Chicago, Ill.—The Folwell-Ahlskog Co. has moved its office from the McCormick Bldg. to larger quarters at 332 N. Michigan ave.

Chicago, Ill.—The Buffalo Weaving & Belting Co. has opened a branch in this city, with R. H. Geier and L. H. Winne, both of whom were connected with W. H. Salisbury & Co. for many years, in charge.

Kansas City, Mo.—W. C. Peak, who for many years has been in charge of this branch of the Howe Scale Co. recently resigned to take a position with the Service Caster & Truck Co. Fred L. Callicotte succeeds Mr. Peak.

Chicago, Ill.—H. Z. Ballinger, formerly associated with the Three Americas Co. and later a member of the firm of Ballinger & McAllister, is now with the Burrell Engineering & Construction Co. by whom he was employed many years ago.

New York, N. Y.—The Attorney-General has announced an agreement for the entry of a consent decree in an action against the bricklayers and plasterers' union in which the unions agree to abandon restrictions on production, on the right of employers to purchase non-union materials, and not to discriminate against independent contractors, or to permit unions to be used for the collection of claims by materialmen or contractors.

Chicago, Ill.—Jones & Laughlin Steel Co., one of the most important of the independents, March 7 advanced the price of bars, shapes and plates to \$1.50 per 100 pounds. It was stated by an official of the company that the new schedule is still very low, from the standpoint of cost of production, and, in view of the activity of the market during the last ten days, and the prospect for early spring and summer, a further advance in the near future may be expected. The advance of today is equivalent to \$4.50 a ton.

Springfield, Ill., Feb. 28.—Cement manufacturers today expressed their willingness to do their bit toward maximum highway construction in Illinois in 1922 when they offered to supply 4,000,000 barrels of cement to the state at prices ranging from \$1.30 to \$1.40 a barrel. The lowest bid, offering 600,000 barrels at \$1.30 a barrel, was made by the Marquette Portland Cement company, a reduction of 25 cents a barrel from the bids made Jan. 8.

Chicago, Ill.—In a recent address before the Rotary Club of Cleveland, Mr. Charles Piez of the Link-Belt Co. said: "The railroad unions, the miners' unions and the building trades unions are totally lacking in a note of sympathy for our common humanity. The leaders of the unions lack any consideration of their highest duties as members of society in their business dealings . . . I do not refer to the rank and file of the workmen, but I do refer to the leaders who have set up the worst czarism this country has ever known. It is only the indifference of the public that makes the czarism of union leaders possible, but the public now is interested."

TOKIO, JAPAN, on Mar. 3 reported the closing Feb. 28 of the stock exchanges at Osaka, Kobe and Yokohama, and the rice exchange at Osaka on account of the collapse of an attempted corner in rice by bull operators.

CANADIAN grain inspection is complained of by a Gloucester, Eng., firm of importers, John Weston & Co., who employed a public analyst, finding 5.5 per cent of rye, 93 per cent of wheat and 1.5 per cent of dirt in a cargo bought as No. 1 Northern Manitoba wheat. They have placed the facts before the High Commissioner for Canada.

## Send us RAILROAD CLAIMS FOR COLLECTION

Send in Claims of Every Description  
No Collection—No Pay

Don't Overlook  
Delay, Shortage, Decline in Market  
and Deterioration Claims  
Over 8100 Railroad Claims Collected  
in 1920.

The Security Adjustment Co., Inc.  
1132-1156 Builders Exchange Bldg.  
MINNEAPOLIS, MINN.

References: Any bank, mercantile agency, commission firm or the editor of this publication.



## Changes in Rates

As shown by tariffs recently filed with the Interstate Commerce Com'n the carriers have made the following changes in rates:

**Western Trunk Lines** in Sup. 17 to 1-P names rules, regulations and exceptions to classifications, including certain applications to grain and grain products, effective Apr. 1.

**Erie** in Special Sups. to two tariffs issued Dec. 22 and Jan. 11 make reductions in rates on grain and grain products, effective on individual tariffs Jan. 1 and Jan. 16.

**C. B. & Q.** in Sup. 31 to 3457-H, Q.O.K.C. 112-I, names rules and regulations affecting freight traffic, including reconsigning, stopping in transit, and similar service, effective Mar. 25.

**C. & E. I.** in Sup. 7 to 8625-C names joint rates on grain and grain products from stations on its line and on the C. & I. C. Ry. to points in Ala., Ark., Fla., La., Miss., and Tenn., effective Apr. 1.

**C. & E. I.** in Sup. 22 to 8625-B names joint rates on grain and grain products from stations on its line and on the C. & I. C. Ry., to points in Ala., Ark., La., Fla., Miss., and Tenn., effective Apr. 1.

**C. B. & Q.** in Sup. 19 to 3200-E names local, joint and proportional rates on grain, grain products and seeds between Mo. River Points and Chicago, Peoria, Ill., St. Louis, Mo., St. Paul, Minneapolis, Duluth, Winona, Minn., La-Crosse, Wis., effective Apr. 1.

**C. & E. I.** in Sup. 37 to 8650 names joint and proportional rates on grain, grain products and by products, also certain cottonseed products, from stations on its line and on the C. & I. C. Ry. to points in N. Y., Ohio, Pa., W. Va., and the Dominion of Canada, effective Apr. 1.

**L. A. Lowery, agt.,** in Sup. 4 to 20-L names local and joint terminal charges, rules and regulations from or to points within the Chicago District, on out bound and in bound traffic, also intermediate service on traffic passing thru the District, effective Feb. 25.

**C. R. I. & P.** in Sup. 8 to 27537-F names joint and proportional rates on grain, grain products, seeds, hay and broom corn from stations on its lines in Ill., Ia., Kan., Minn., Mo., and Neb., to stations in Ill., Ia., Ky., Mich., N. Y., Ohio and Pa., effective Apr. 1.

**C. R. I. & P.** in Sup. 14 to 19687-L names joint and proportional rates on grain, grain products, seed, hay and broom corn from Mo. River stations and other stations in Ill., Ia., Minn., Mo., and S. D. on its lines to Miss. Valley Points and other stations in Ala., Ark., Fla., La., Miss., and Tenn., also to Gulf Ports for export, effective Mar. 25.

**C. F. Ass'n** in Sup. 12 to 245-A names local, joint and proportional rates on grain, grain products and by products from points in Ill., Ind., Ia., Ky., Mich., Mo., N. Y., Ohio, Pa., W. Va., Wis., to Albany, Baltimore, Boston, New York, Philadelphia, Rochester, Syracuse, Utica, also to other points named in tariff and basis for rates to U. S. and Canadian ports for export, effective Mar. 29.

**Ill. Central** in Sup. 12 to 1537-E names local, joint and proportional rates on grain, grain products, cotton seed products and seeds between stations in Ill., Ind., Wis., Dubuque, Ia., St. Louis, Mo., and Chicago, Peoria, Ill., Milwaukee, Wis., Minneapolis, Minn., Paducah, Ky., St. Louis, Mo., Ohio River Crossings, also other stations in Ill., Ind., Ia., Ky., Mich., Minn., Mo., Wis., effective Apr. 1.

**C. B. & Q.** in Sup. 5 to 1362-M names local, joint and proportional rates on grain, grain products and seeds between St. Paul, Minneapolis, Duluth, Stillwater, Winona, Minn., La Crosse, Wis., etc., and stations in Ill., Ind., Ky., West Bank Mississippi River points (Dubuque, Ia., to St. Louis, Mo., inc.), Green Bay, Kewaunee, Wis., etc., also to points east of the Ill.-Ind. state line or south of the Ohio River, effective Mar. 25.

**Ill. Central** in 601-G cancels 601-F and names local, joint and proportional rates on grain, grain products, hay and seeds between stations in Ia., Minn., S. D., on its lines, C. R. & I. C. Ry., Ft. D. D. M. & S. R. R., G. N. Ry., W. C. F. & N. Ry., and Chicago, Peoria, Ill., St. Louis, Mo., Milwaukee, Wis., Minneapolis,

Minn., Omaha, Neb., Ohio River Crossings and other stations in Ill., Ind., Ia., Minn., S. D., Ohio, Wis., effective Apr. 1.

## E. L. Wellman in the Grasp of the Law.

The federal department of justice captured Ernest L. Wellman after his disappearance from Grand Rapids, Mich., at Detroit Sunday night, Feb. 26, and brot him back to be arraigned for forging Bs/L in violation of the transportation act.

The frauds were discovered a month earlier and Wellman was watched. The Old National



E. L. Wellman, Grand Rapids, Mich.

Bank complained to the U. S. District Attorney of the alleged forgeries. For two years it is said Wellman had been forging the signatures of railroad agents. The method was to duplicate the original Bs/L, using the originals to get the goods from the carriers and depositing the copies with the banks as collateral security for loans aggregating \$82,000.

A. K. Druke, sec'y-treas. of the E. L. Wellman Co., of which Wellman was pres., alleges that the business will be continued at the offices in the Murray bldg., Grand Rapids.

Wellman began life as a messenger boy for the telegraph company and was graduated into a brokerage house and then went with the Valley City Milling Co. About 15 years ago he engaged in the grain and bean business on his own account. He dealt so extensively in beans that he became known as "Carload Wellman." When the war inflated the prices of beans and grain Wellman is said to have profited \$500,000, but is alleged to have been on the wrong side of the market when the slump came.

## B/L Forgeries in C. H. Thayer & Co.

Paul B. Malebranche, former cashier and confidential clerk of C. H. Thayer & Co., grain commission merchants of Chicago, Ill., with Clarence H. Thayer, head of the firm, was indicted by the grand jury Mar. 2 on the charge of having defrauded the Corn Exchange and other banks of \$100,000 by forged Bs/L.

The forgery consisted of making an imitation of the dating stamp used by the joint agent of the railroads, to counterfeit his receipts for Bs/L.

Thayer states that Malebranche was a confidential clerk with power to sign checks. Discrepancies were discovered in his records and Thayer discharged him. An investigation then revealed his irregularities at the bank, and the directors of the Board of Trade appointed a special com'te consisting of Geo. A. Wegener, Royal W. Bell and Henry Rumsey to investigate. The indictment followed before they reported their findings. Malebranche has disappeared.

The firm's trades have been transferred to other brokers who are taking care of the customers, with the aid of Mr. Thayer, no receiver having yet been appointed.

## BONCAR

(Re'g)

## The Weevil Destroyer

SAFE and SANE!

Write for literature and prices.

Weevil Dept.

HEIL CHEMICAL CO.

210 So. 4th Street St. Louis, Mo.

## HESS

## GRAIN DRIERS CONDITIONERS

## Moisture Testers and Accessories

## DOCKAGE SIEVES and SCALES

## EMERSON KICKERS

## Grain Testing and Sampling Apparatus

Write for free booklet.

## HESS WARMING & VENTILATING CO.

907 Tacoma Building  
CHICAGO

ACCOUNT  
BOOKS

FOR SALE BY  
Grain Dealers Journal  
CHICAGO



## Patents Granted

**1,406,894. Door for Grain Cars.** George L. Redshaw, Grenora, N. D. A guide rail supports the movable door in the open position. A collapsible door is disposed across the doorway independently of the movement of the door. A continuation of the guide rail supports the door in, and facilitates the movement of the door to, the closed position.

**1,407,926. Car Dumper.** Arthur F. Case, assignor to the Wellman-Seaver-Morgan Co., Cleveland, O. A cradle which may be turned is adapted to receive a car and has movable clamps. Clamp counterweights are carried by the cradle and means are provided for causing the counterweights to exert a holding action on the clamps after the cradle has been turned a predetermined amount from normal position.

**1,408,299. Conveyor Loader.** Albert B. Holley, Virginia, Minn. This machine has a portable frame with a normally inclined trough having lengthwise and vertically shifting movements in the frame. There is a second trough, the inner end of which is disposed beneath the first trough, this being connected to and movable similarly with the first trough. The inner end of the second trough is connected to an upright pivot.

**1,406,127. Method and Apparatus for Separating Onion from Wheat.** Cyrus A. Whittaker, Freeburg, Ill. This method of separating grain from onion, garlic and screenings consists in separating the grain into two different grades. These grades then descend in streams, developing a partial vacuum on one side of the streams, and the streams are subjected to sub-

stantially horizontal transverse air currents developed by the partial vacuum to remove the objectionable particles.

**1,405,690. Seed Reclaiming Process.** Shirl Herr, assignor to Crawfordville Seed Co., Crawfordville, Ind. This process of separating and classifying heterogeneous material consists in causing particles of magnetic permeability to adhere directly to as much of the material as have characteristics capable of such adhesion, then passing the mass thru the field of a magnet to segregate the bodies with attached particles of magnetic permeability from the rest of the material.

**1,405,692. Grain Handling Means.** Earl C. Starnes and Edward C. Willis, Alpha, Minn. This is a grain cleaning apparatus having a dumping pocket with an inclined bottom, a vertically disposed baffle plate for rebounding and spreading the grain near and above the lower end of the inclined bottom. A grain outlet is adjacent the lower end of the bottom and means are provided for blowing a current of air upwardly past the opening for cleaning the grain dropping thru. Fingers in series are arranged to spread the grain into the current of air.

**1,405,666. Grain Car Door.** Argyle Campbell, assignor to Enterprise Railway Equipment Co., Chicago, Ill. A pair of grain doors inside a car are arranged to be positioned one above the other when in the operative position. The lower of the doors is pivotally attached at a relatively fixed point to the car at one of its lower corners, the upper door being similarly attached at its lower corner on the opposite side of the door opening. The last named pivotal connection is adjustable to permit the upper door to be lowered bodily to the floor when swung to an operative position.

**1,407,510. Apparatus for Unloading Grain.** Cecil Bentham, Manchester, England, assignor to Henry Simon, Ltd., Manchester, England. Pneumatic means for unloading grain comprising a rotatable receiver, means for rotating the receiver about a vertical axis, a tubular member rigidly connected to the side of the receiver and communicating with it. A conduit is pivotally connected to the tubular member and may be swung about its pivotal connection to and from an extended position. Means are provided for relieving pressure within the receiver whereby the material to be handled is drawn into the receiver thru the conduit and tubular member.

**1,406,928. Bulk Storage and Handling of Grain.** Walter H. Bull, Coburg, Melbourne, Victoria, Australia. A structure, referred to as a silo, has a perforated covering and its floor is provided with an inclined grain shedding surface (hoppered) extending from end to end of the silo, the inclined grain shedding surfaces converging toward the longitudinal center of the silo and also inclining downwardly toward the side edges of the silo. The silo consists of a plurality of storage compartments, and there is an elevator for placing grain into the silo thru the perforated covering, while there are means for delivering it from the elevator to any of the compartments. Discharge chutes depend from the grain shedding surface and have their lower ends disposed above the ground level, with outlet valves controlling the discharge of the grain.

A RESOLUTION has been introduced in the Maryland legislature requesting the appointment of a commission to investigate the feasibility of standardizing forms and types of farm machinery.

### Insurance Notes.

**KANSAS CITY, MO.**—F. F. Burroughs, of the Mutual Fire Prevention Buro, has succeeded Rollie E. Watson as ass't manager of the Southwestern Mutual Ins. Agency.

**WICHITA, KAN.**—Rollie E. Watson, for years manager of the Mutual Fire Ins. Ass'n of Ill. here, has again opened a branch office and will represent the same company with Henry and John Braunagel as inspectors.

A FIELD man went into an elevator and found the water buckets stapled and padlocked. If the staples will pull without too much effort there is nothing wrong with this system, but every second is valuable after a fire breaks out, and we feel there would be time wasted getting these buckets into action. Use car seals to keep the buckets "put."—*Our Paper.*

A COM'ITE has been appointed thru collaboration of the Buro of Standards, Weather Buro and the American Institute of Electrical Engineers to prepare a lightning rod code. The plan is to develop practical methods, practices and appliances for making structures safe against lightning and to put the mark of official and scientific sanction on lightning protection methods.

BARRELS and buckets saved 21 elevators insured in the Grain Dealers Fire Ins. Co. last year. The amount of loss was only \$1,926.39; but if the plants had been destroyed, the loss would have been \$244,000 as that is the amount at risk on the 21 houses. That is a substantial saving for the individuals who owned the elevators, and it is reflected to all elevator operators by a reduction in insurance costs.

### You Can Reduce Fire Losses by Observing Seven Points.

The Underwriting Committee of the Mill Mutual fire insurance companies met at the office of the Mutual Fire Prevention Bureau last month, and made a careful examination of the loss records for the past year. Surveys and inspection reports on the plants destroyed or damaged, and the loss reports giving cause of fire when known and conditions when the fire was from an unknown cause were presented and after four days of study the Committee recommended that the Bureau proceed with a campaign of education of the policy holders along the following lines:

1. Proper installation of lightning rods.
2. Special attention to repair of siding and roofs.
3. Elimination of bad exposures as far as possible.
4. Making elevator heads easily accessible.
5. Better care of plant and especially the bearings.
6. Final examination of plant before leaving.
7. Locking up.

Those are the seven precautions which, if taken, will eliminate a very large percentage of flour mill and grain elevator fires.

THE 51st brokerage firm to fail in a month in New York City filed petition in bankruptcy Mar. 7.

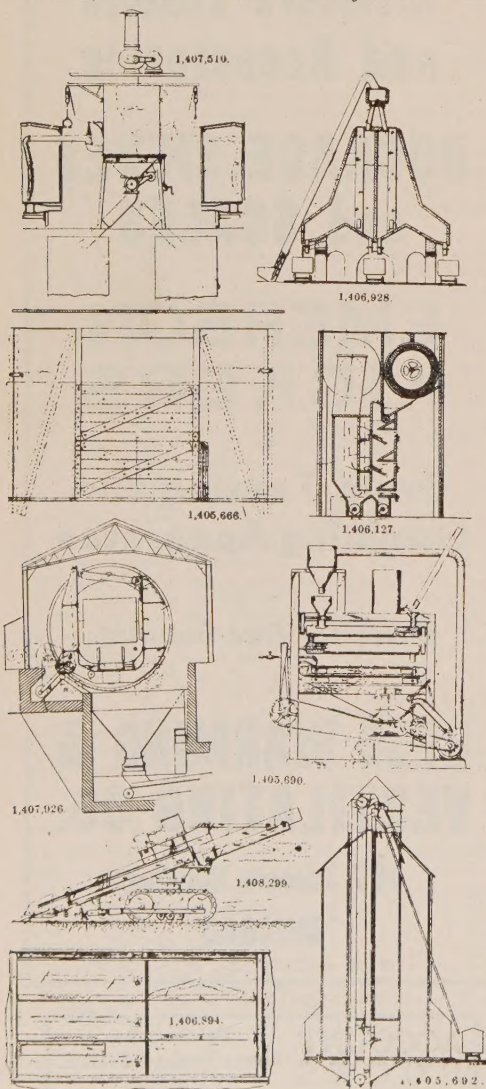
## Fire Barrels That Will Not Freeze at 55° Below Zero



Our 50 gallon Metal Fire Barrels will save you any worry. Complete with 3 buckets hung on hooks and submerged in anti-freeze solution ready for instant use.

Write for full particulars to

**CARBONDALE CALCIUM COMPANY**  
CARBONDALE, PENN.





## THE MILL MUTUAL

Fire Insurance Companies have paid \$1,150,769.00 for Fire Loss caused directly by

## LIGHTNING

during the past twelve years.

NOT ONE LOSS has been reported on a building having APPROVED LIGHTNING PROTECTION.

The insurance saving on a flour mill or grain elevator makes the protection of the property a sound business proposition.

Spring and the season of Lightning Losses is here. Act today.

Ask for our Installation Specifications.

**Mutual Fire Prevention Bureau**  
230 East Ohio Street Chicago, Illinois



*"... you are looking for insurance service," then you need seek no longer for you will find that the Mill and Elevator Department of the Hartford Fire Insurance Co. makes even the smallest details important facts.*

## Hartford Mill and Elevator Underwriters and Engineers

realize that when fire or explosion comes, the loss may be heavy to elevator and mill owners. They know that insurance is an important element in every business. From it must come the money for rebuilding. That's why these experts not only insure your property in the Hartford Fire Insurance Co. but help to reduce your hazards.

*For detailed information write to the*

## Hartford Fire Insurance Co.

Mill and Elevator Department  
H. W. DONNAN, Supt.

39 So. La Salle St.

Chicago, Ill.



The Seal of *Certainty*

## Western Grain Dealers Mutual Fire Insurance Company

DES MOINES, IOWA

J. A. KING, President Geo. A. WELLS, Secretary

Write for Information Regarding Short Term Grain Insurance

## TORNADOES

March to September are the months of greatest tornado frequency in the states east of the Rocky Mountains. No place in that section is safe from the lash of this monster.

Don't wait until the last moment to look after your tornado insurance. Write us now. A "Grain Dealers Mutual" Complete Windstorm policy for \$10,000 costs less than Five Cents a Day.

C. R. McCOTTER  
Western Manager  
Omaha, Nebraska



C. A. McCOTTER  
Secretary  
Indianapolis, Ind.

## ORGANIZED 1902 TRI-STATE MUTUAL GRAIN DEALERS FIRE INSURANCE COMPANY LIVERNE, MINN.

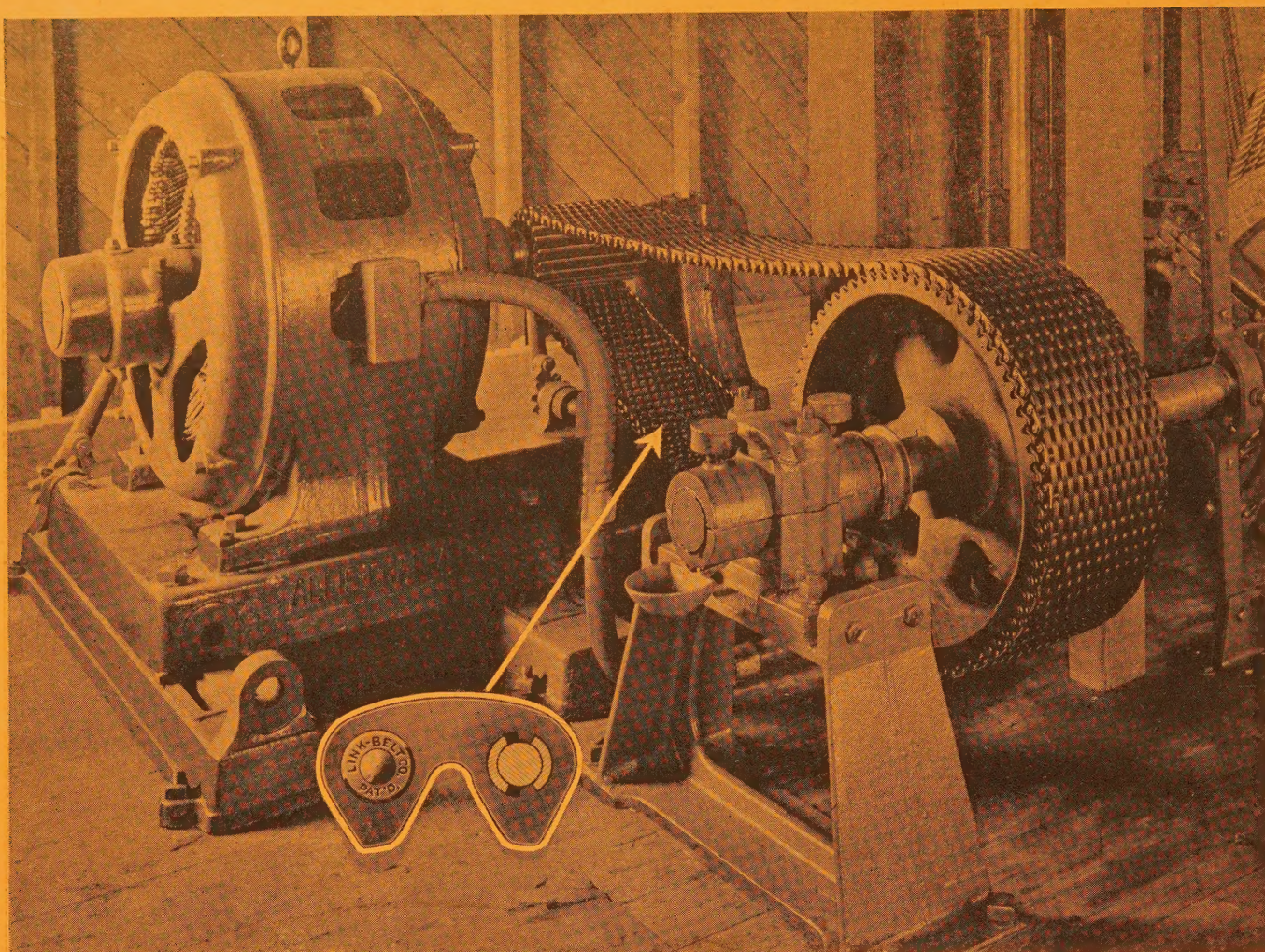
Average return for 19 years, 50% of the Deposit Premium.

Grain values reported monthly affords full protection.

Write for Information.

E. H. MORELAND, Secretary





## Link-Belt Silent Chain

### The Efficient Drive for Grain Handling Plants

The Link-Belt Silent Chain Drive transmits the power of the motor without slip, and is 98.2% efficient on actual test. It is flexible as a belt—positive as a gear—more efficient than either. It is the ideal drive for grain handling plants.

The use of the Link-Belt Silent Chain Drive simplifies the power transmission problem. Silent chain operates on short centers and can therefore be encased in an oil-retaining, dust-

proof casing, requiring a minimum of attention for lubrication and care. The result is a smooth, quiet drive, having decided advantages over the older forms of power transmission.

Our experienced engineers can help you get better results from your power transmission equipment. Their advice is yours for the asking. Send for our specialist on grain elevator and flour mill transmissions. Get our book No. 309.

#### PHILADELPHIA

New York . . .  
Boston 9 . . .  
Pittsburgh . . .  
St. Louis . . .  
Buffalo . . .  
Wilkes-Barre . . .  
Huntington, W. Va. . .

#### CHICAGO

Woolworth Bldg. . .  
49 Federal St. . .  
1501 Park Bldg. . .  
Central National Bank Bldg. . .  
547 Ellicott Square . . .  
2nd National Bank Bldg. . .  
Robson-Prichard Bldg. . .

#### LINK-BELT COMPANY

Cleveland . . . 429 Kirby Bldg.  
Detroit . . . 4210 Woodward Ave.  
Kansas City, Mo. . . 306 Elmhurst Bldg.  
Seattle . . . 820 First Ave., S.  
Portland, Ore. . . First and Stark Sts.  
San Francisco . . . 168 Second St.  
Los Angeles . . . 163 N. Los Angeles St.

In Canada Canadian Link-Belt Co., Ltd., Toronto and Montreal

#### INDIANAPOLIS

Denver . . . Lindrooth, Shubart & Co., Boston Bldg.  
Louisville, Ky. . . Frederick Wehle, Starks Bldg.  
New Orleans . . . C. O. Hinz, 504 Carondelet Bldg.  
Birmingham, Ala. . . S. L. Morrow, 720 Brown-Marx Bldg.  
Charlotte, N. C. . . J. S. Cothran, Com'l Bank Bldg.

#### TORONTO

H. W. CALDWELL & SON CO., CHICAGO, 17th and Western Ave.

NEW YORK, Woolworth Bldg.

DALLAS, TEXAS, 709 Main St.

# LINK-BELT